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PAPER TRADE JOURNAL

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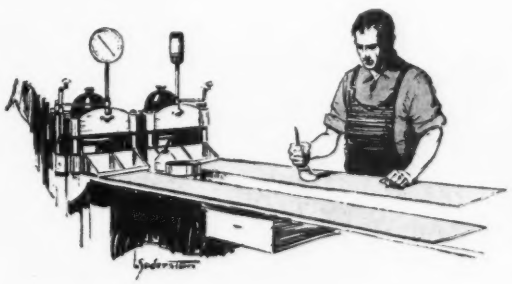
The final secret of longer life in a piece of power belting

Belting experts and users know strong laps are essential in transmission belting.

It takes a combination of correct materials, methods, machinery and highly trained men to do a good job at this stage of belt making.

The Graton & Knight practice is to make each man an expert in one type of work, to give him a good day's pay for a good day's production, to pay him a bonus for every sign of extra excellence.

When you put Graton & Knight belts on your drives you get the finest belting



leather that skill can produce, put together by men whose reputation is at stake on every job. There is strength in every pore and fibre of the leather, in every lap and seam, in every detail of finish and construction.

The whole process is controlled by exact, precise formula, based on chemical and engineering studies continually carried on in our own laboratories.

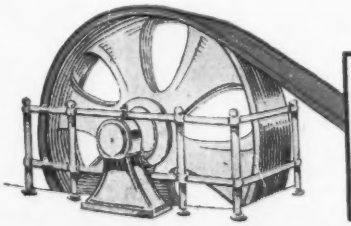
That's why Graton & Knight Belts last longer.

Graton & Knight Company
Worcester, Mass.
Branch offices throughout the World

GRATON & KNIGHT
Standardized
LEATHER BELTING LASTS LONGER

The "STANDARDIZED BELTING MANUAL"

contains 170 pages of useful information about belting, how to use it, take care of it, and make it deliver the most for your money. Send for a copy.



GRATON & KNIGHT COMPANY,
Worcester, Mass. 101-E
Send me a copy of "*Standardized Belting Manual.*"
Name .....
Company .....
Place .....
Prices, quality for quality, 5 to 10% lower than the field.

GRATON & KNIGHT

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WOOL PRODUCTS

REG. U. S. PAT. OFF.

LONGER FELT LIFE

The patented process by which Kenwood TANNED Felts are treated counteracts the deteriorating effects of water, alkali and acids, resulting in longer life of the Felt. But in

KENWOOD TANNED FELTS

even this advantage is overshadowed by OTHER resulting advantages—

The Kenwood tanning process also gives

A SOFTER, KINDLIER HANDLE
QUICKER "BREAK-IN"
LESS RUNNING TROUBLE
HIGHER WATER REMOVAL

F. C. HUYCK & SONS

KENWOOD MILLS, ALBANY, N. Y.

KENWOOD MILLS LTD., ARNPRIOR, ONTARIO

Entered as second class matter August 13, 1925, at the Post Office at East Stroudsburg, Pa., under Act of Congress of March 3, 1879. ESTABLISHED 1872 FIFTY-SIXTH YEAR Published every Thursday by the Lockwood Trade Journal Co., at 34 N. Crystal St., E. Stroudsburg, Pa
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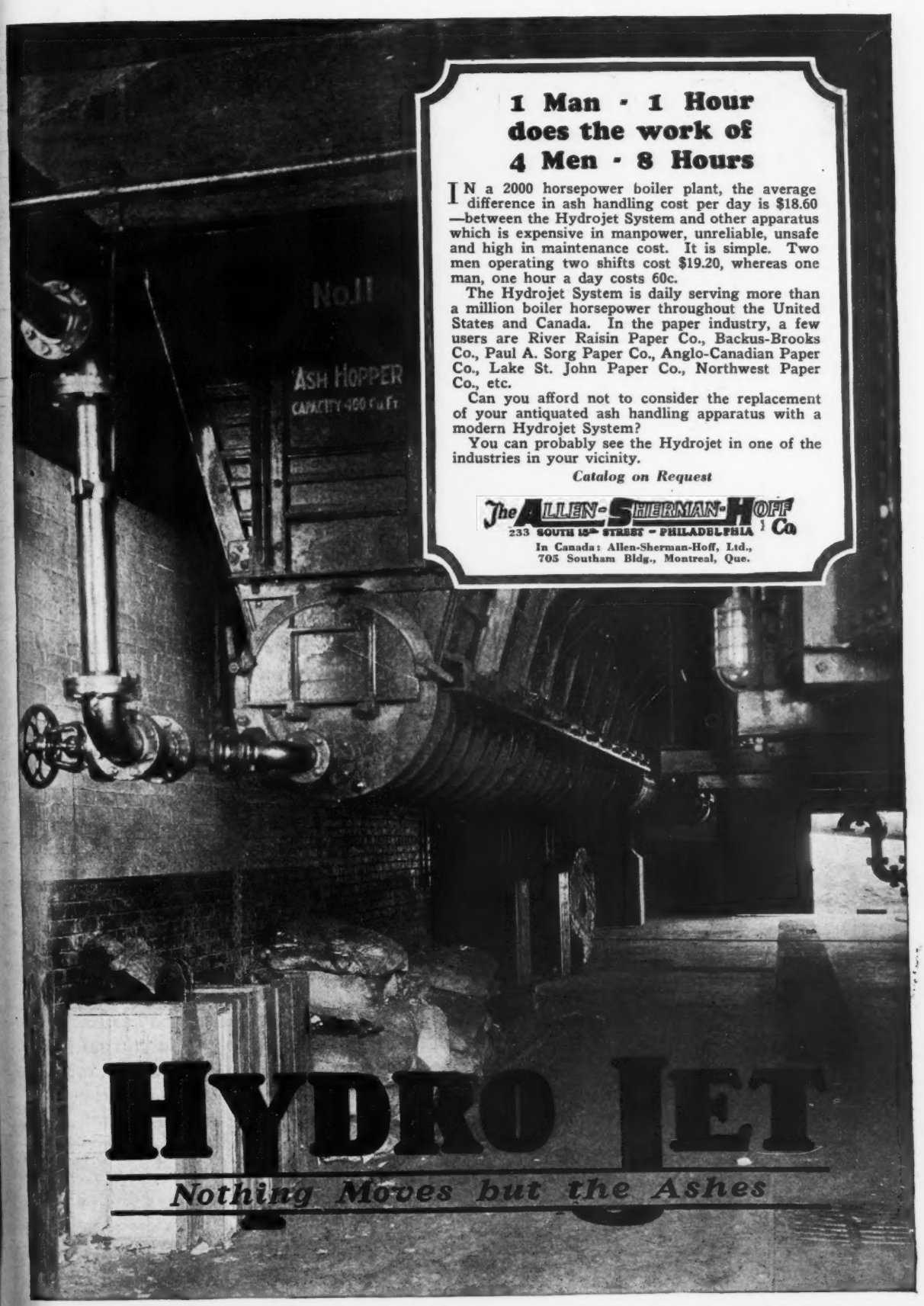

1 Man - 1 Hour does the work of 4 Men - 8 Hours

IN a 2000 horsepower boiler plant, the average difference in ash handling cost per day is $18.60 —between the Hydrojet System and other apparatus which is expensive in manpower, unreliable, unsafe and high in maintenance cost. It is simple. Two men operating two shifts cost $19.20, whereas one man, one hour a day costs 60c.

The Hydrojet System is daily serving more than a million boiler horsepower throughout the United States and Canada. In the paper industry, a few users are River Raisin Paper Co., Backus-Brooks Co., Paul A. Sorg Paper Co., Anglo-Canadian Paper Co., Lake St. John Paper Co., Northwest Paper Co., etc.

Can you afford not to consider the replacement of your antiquated ash handling apparatus with a modern Hydrojet System?

You can probably see the Hydrojet in one of the industries in your vicinity.

Catalog on Request

The ALLEN-SHERMAN-HOFF Co
233 SOUTH 15TH STREET - PHILADELPHIA

In Canada: Allen-Sherman-Hoff, Ltd.,
705 Southam Bldg., Montreal, Que.

HYDRO JET

Nothing Moves but the Ashes

BROUGHTON SYSTEMS

of Dryer Drainage

Reduces costs—lower operation pressure on the dryers. Dries paper or board with less steam per pound of water evaporated.

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"Those Diamond Alkalies are carried in warehouse by distributors all over the country. In fact, there's a distributor of Diamond Alkalies right in this town. Your requisition is as good as delivered, so forget it".

"By the way Jim, I am dictating a letter to the Diamond Company for a carload of that Diamond 58% Soda Ash you said was so remarkably pure and uniform. Carloads, you know, are shipped direct from their plant at Painesville, Ohio".

DIAMOND ALKALI CO.

Pittsburgh, Pa. *and everywhere!*

You can make more paper with bricks and mortar

but...

adding more floor space to increase beater room capacity is a mighty expensive proposition. It takes a lot of planning and time and adds to overhead all along the line.

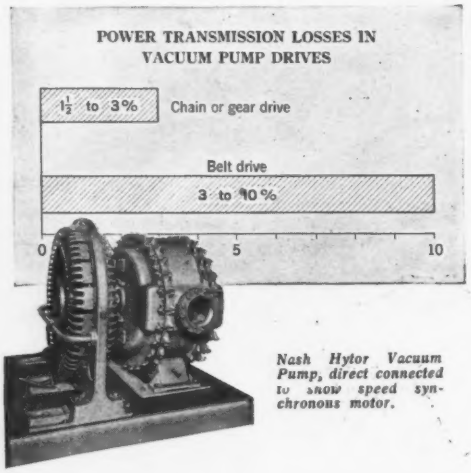
When production is hampered by inadequate beater supply, there's an easier, more direct, more economical way out. A NOBLE & WOOD new type High Density Beater, occupying the identical floor space of one of your present beaters, will triple the output of that unit.

And that's not all! Stock will be more uniform, better hydrated, as heavy in density as you care to handle it—giving you higher quality stuff for your paper machines and a better finished product.

No need to junk your present beaters. We can convert them to this new, super-efficient high density type, using a good part of the equipment you have. Let our engineers help you cut overhead and improve production. Write for full information.

NOBLE & WOOD
MACHINE COMPANY
Hoosick Falls New York

You can avoid these power losses by direct driven Nash pumps



Nash Hytor Vacuum Pump, direct connected to slow speed synchronous motor.

Experience shows that the power transmission losses for a chain or gear driven vacuum pump are generally from 1½ to 3%. And from 3 to 10% for a belt drive.

The one way to avoid these losses is to install Nash Hytor Vacuum Pumps, which ***can be direct driven by slow speed synchronous motors.***

The efficiency of these synchronous motors, in the smaller sizes, is practically equal to that of the high speed induction motor, neglecting belt losses. In the larger sizes, 300 h. p. and higher, the efficiency of the synchronous motor is higher. This statement takes into account the losses in the motor driven exciter which is supplied with the synchronous motor.

NASH ENGINEERING COMPANY

164 Wilson Road — S. Norwalk, Conn.

New England Representative
Mr. G. H. Gleason, Nottingham Bldg., Copley Square, Boston, Mass.

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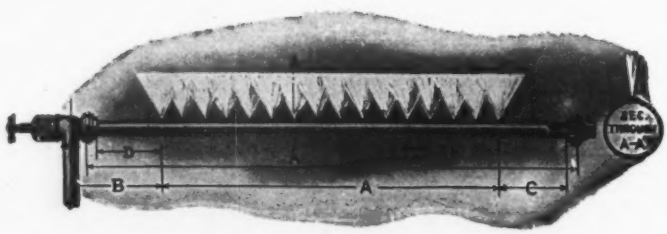
Nash Hytor

VACUUM PUMPS AND COMPRESSORS

THE "RAINSTORM" SHOWER PIPE



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SOUTH WINDHAM, CONN.

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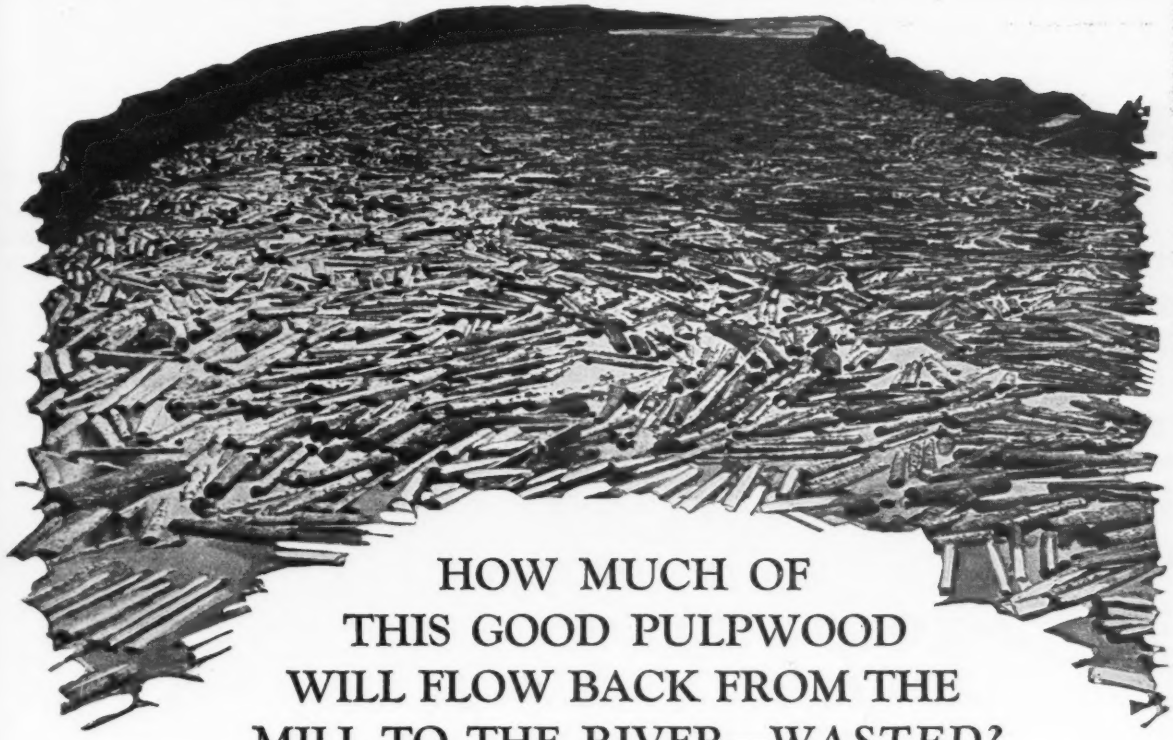
A Complete Line of Paper Bag Making Machinery

BUILDERS OF DEPENDABLE MACHINERY FOR THE PAPER MILL

The Undercut Trimmer

Die Cutting Presses



HOW MUCH OF THIS GOOD PULPWOOD WILL FLOW BACK FROM THE MILL TO THE RIVER—*WASTED?*

Waste that can be prevented by a Dorr Save-All!

A recent check-up on the operation of a Dorr Save-All at a Canadian mill showed an average recovery of 96.5% of the fibre that formerly ran to waste in the white water. Samples were taken over 24-hour periods on 12 different occasions during a month's run, the consistency and volume of feed varying considerably.

That is one of the outstanding features of Dorr Save-All operation. No delicate balance of the feed is required, nor is it necessary to throw additional good stock into the white water. It takes the flow just as it comes, recovers the stock and clarifies the water, without the aid of complicated accessory equipment.

Let us send you pamphlet describing the operation of this machine.

DORRCO

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ENGINEERS

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DENVER LOS ANGELES CHICAGO WILKES-BARRE JOPLIN

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Joachimsthalerstr. 10, Berlin W.15

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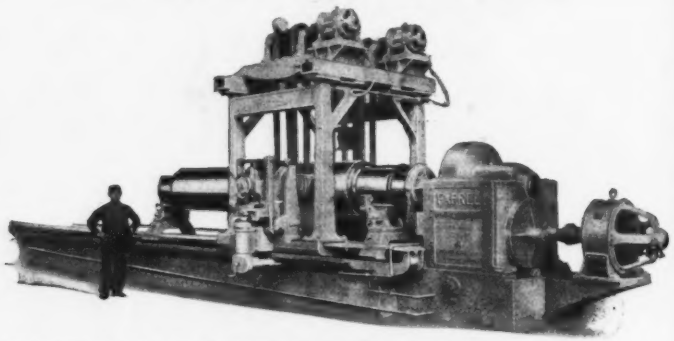
126, Rue de Provence Paris 8

INVESTIGATION TESTS DESIGN EQUIPMENT

FARREL

FARREL CALENDERS are made with Hydraulic, Electric or Ratchet Lift, all operated from the floor.

FARREL NEW TYPE ROLL GRINDER is made in 24", 32", 36" and 42" sizes all electrically driven throughout and fitted with new crowning device, Geared Head, Automatic Lubrication, etc.



FARREL-BIRMINGHAM COMPANY INC.,
ANSONIA, CONN.

Successors to: { Farrel Foundry & Machine Co., Ansonia, Conn., Est. 1848.
{ Birmingham Iron Foundry, Derby, Conn., Est. 1836.

Uncle Jake says—

"Some mighty poor trotting horses have made a record when their gait was changed to pacing."

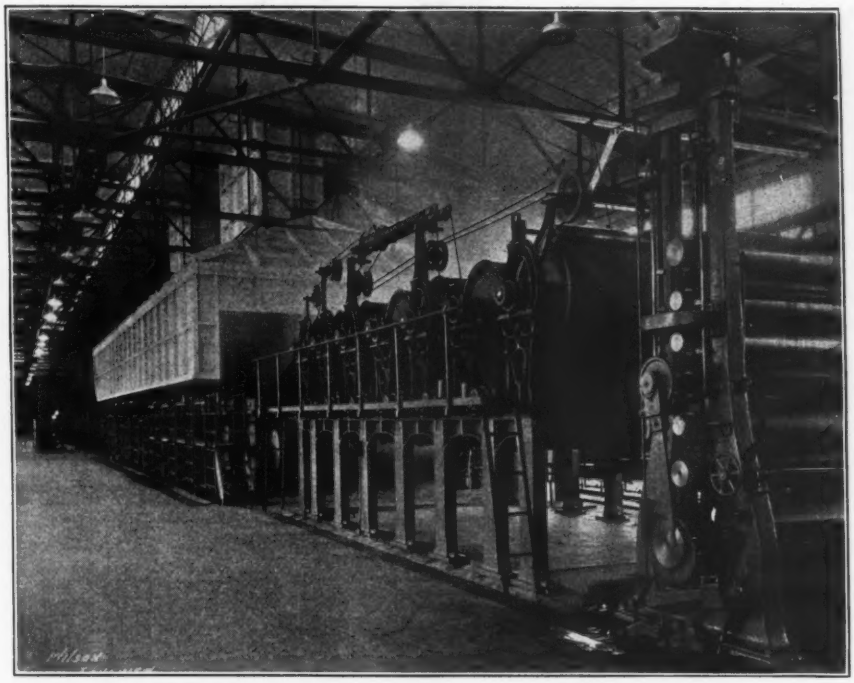
Quite frequently we run across a Printer who tells us that by switching to

KVP BOND

he has materially increased his business.

Our Research Department has unearthed some things that may help you. Ask us and they will come to you without charge.

KALAMAZOO VEGETABLE PARCHMENT CO. KALAMAZOO, MICH.



In One Year—Two Vertical Dryer installations on the West Coast

Out on the Pacific Coast where paper and pulp making is one of the newer industries, and entire mills are being equipped at one time, it is significant that many of them are using Vertical Dryers.

The above photograph is that of the finishing end of the Vertical Dryer Section in the Longview Fibre Company's new mill. In this particular installation the wet sheet goes from the press part to a Vertical Dryer Section located in the basement and finishes on the double deck section in the foreground. You will notice that these double deck dryers are located above the floor to eliminate a pit. Notice, too, that all the dryers, of which there are 101, are equipped with Sheahan Carriers.

This is the second Vertical Dryer installation to start on the Pacific Coast this year. In addition, two more, now being erected on our floor, will be shipped shortly after the first of the year.

More and more, mills are finding that it is only in Vertical Dryers that they get the efficient drying, the improved appearance of the sheet, the low cost of operation, and the saving in steam and overhead that aggressive modern competition demands.

You should hear the whole story. Why not let us tell it to you?

THE BLACK-CLAWSON COMPANY
HAMILTON, OHIO
Established 1873
Export Offices: 15 Park Row, New York City

**Builders of Highest Quality Paper and Pulp Mill Machinery.
Patentees and Sole Builders of Vertical Dryers and Champion Fourdriniers.**

BLACK-CLAWSON

VERTICAL DRYERS

Built with Machine-Tool Accuracy

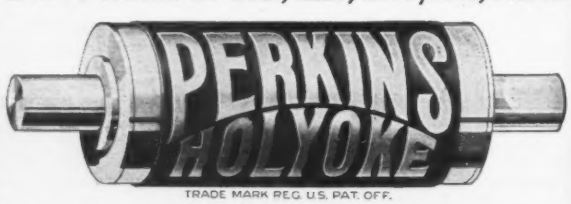
PERKINS
HOLYOKE

CALENDER ROLLS

Since 1873, Perkins Calender Rolls have been built to meet exactly the requirements of paper makers. The marked individuality of Perkins Calender Rolls today has been developed through long years of close application to the problems of the paper industry.

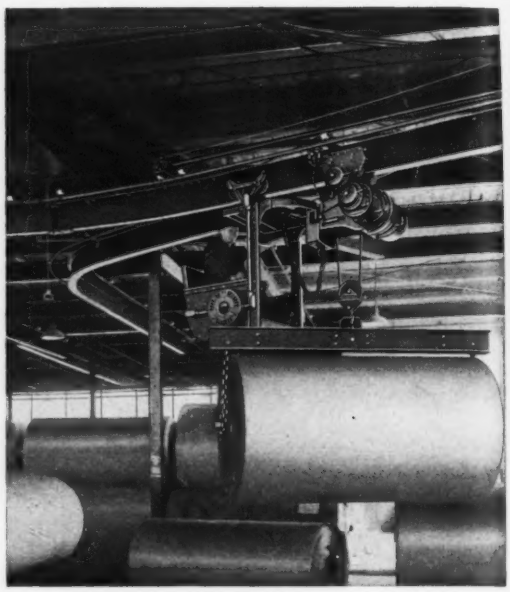
Perkins Calender Rolls are uniform, resilient, resistant. They stand heat better and wear longer.

B. F. Perkins & Son, Inc., Holyoke, Mass.



TRADE MARK REG. U.S. PAT. OFF.

COTTON ROLLS - PAPER ROLLS - EMBOSSING ROLLS - CHILLED IRON ROLLS - GRANITE PRESS ROLLS - WEB SUPERCALENDERS - GLASSINE SUPERCALENDERS - FRICTION CALENDERS EMBOSSING CALENDERS - SHEET CALENDERS - PLATERS - MULLEN PAPER TESTERS TENSILE TESTERS - VENTILATING FANS - RAG CUTTERS - STOCK CUTTERS - PAPER DAMPENERS BLEACH EJECTORS



An "Overhead" that lowers production costs!

The "overhead" system of material handling provided by Shepard's "Aerial Railway" lifts loads to lower handling costs. It moves greater loads of paper in less time than was possible with a gang of eight or ten men, releases these men for production work and saves valuable floor space.

The "Aerial Railway" consists of a Shepard cage operated electric hoist, operating on a Shepard Transfer Crane and a monorail track with suitable switches. It is typically Shepard in design, providing a compact, tightly sealed hoisting unit, a "Balanced" drive, automatic oil bath lubrication and permanent alignment.

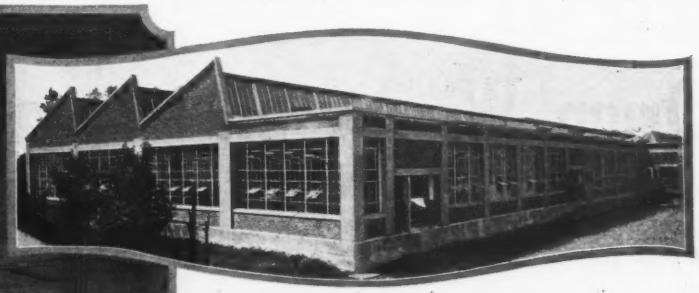
Write for our descriptive bulletin Shepard "Aerial Railway" of Industry.

SHEPARD ELECTRIC CRANE & HOIST CO.

378 Schuyler Avenue,
Montour Falls, N. Y.

Branches in principal cities.
Largest Manufacturers of Electric Hoists in America

SHEPARD
ELECTRIC CRANES & HOISTS



Interior and exterior views of the plant of the Mt. Hope Finishing Co., North Dighton, Mass. The Roof Planks are of Wolmanized Lumber.

Why Decayed Roof Planks?

A FEW FACTS:

1. Characteristics of wood unchanged.
2. Preservative "stays put."
3. Lower-cost lumber may often be specified.
4. No discoloration that affects paintability—can be painted, varnished or stained. No odor.
5. Relatively Fire Retardent, as compared with ordinary untreated lumber.

DO you often wonder why it is that the life of your Roof Planking is not longer? Why your Roof Maintenance cost is so high?

These questions are particularly pertinent in cases where plant operation requires working under a high degree of humidity.

And here is the answer:

It's the Humidity!

With high humidities, you create a favorable condition for decay organisms to flourish. That's what causes decay in your Roof Planking—short life of your roof—increased Roof Maintenance costs.

You can solve this decay problem and reduce your overhead by the use of Wolmanized Lumber—ESPECIALLY TREATED TO RESIST DECAY. It's a real protection!

You insure against Fire Hazard. Why not insure against Decay? Write for our free booklet "Reducing Maintenance Costs," and sample of Wolmanized Lumber.

AMERICAN WOLMANIZED LUMBER CO.

7 South Front Street, Elizabeth, N. J.

Send for free book

WOLMANIZED LUMBER DOES NOT DECAY

Brass Collapsible Drum Winder Shafts

The Moore & White Brass Collapsible Shaft is of rugged construction. The core shaft is steel, accurately machined, and the shaft parts forming the journals are forged steel and easily removed for repairs without disturbing the shaft proper.

No Springs or Small Screws

Equal Expansion Possible Always

No Rolls Stuck On Shafts

Write us today for complete information

THE MOORE & WHITE CO.

Builders of Paper Mill Machinery since 1885.

No. Philadelphia Station, Penna. R. R.
Philadelphia, Pa.

"Let's go Back to ORR'S

"Our felt bills are entirely too high, and the only way to bring them down is to adopt Orr Felts."

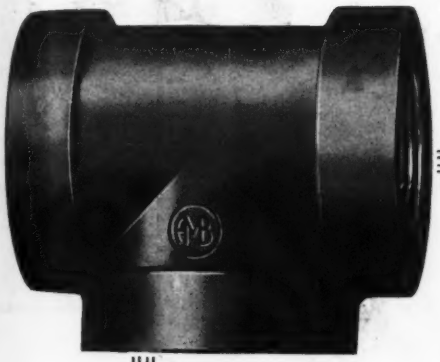
Many a conversation like that has taken place in mills in past years—and quite naturally—

because for ability to take out water FAST, stand punishment and w e a r longer under heavy duty, there is no other felt in the field quite equal to an ORR.

A complete line. A particular O r r for each particular requirement.

THE ORR FELT & BLANKET CO.
PIQUA, OHIO

ORR FELTS



AMB

Hy-ten-sl Bronze

A Bronze as strong as Nickel Steel

Jordan Knives

Pipe Fittings

Red Brass---Flanged and Screwed

Acid Pipe Fittings

Acid Resisting

Special Castings, Rolls, etc.

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AMERICAN MANGANESE BRONZE CO.

Founder and Metallurgical Engineers

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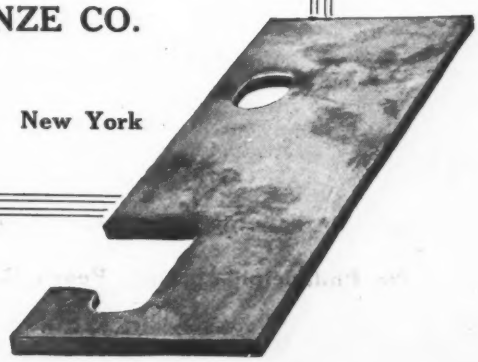
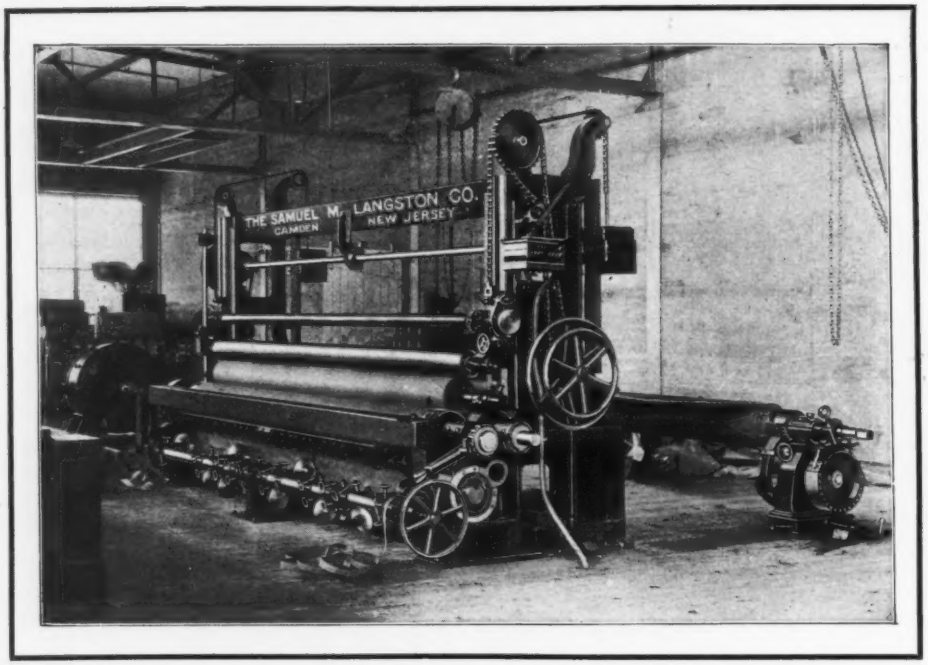
Pittsburgh Cleveland New Orleans New York





WHY
you can make better rolls on the Langston

ROLLS of just the desired degree of tightness, of uniform density, easy to separate, *dustless*.

The making of rolls that meet these specifications presents no special difficulty in mills that use Langston Slitters. Here are some of the reasons:

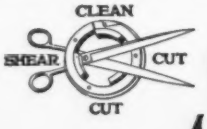
Take the matter of tension. With the Langston winding principle it is a simple matter to produce rolls of exactly the required tightness. You can wind rolls that are tight, starting with the first wrap of the paper around the rewinding shaft, and the tension can be maintained evenly right up to the maximum diameter. This means uniform density.

Rolls made on a Langston are absolutely free of dust. The Langston Shear Cut produces the same character of cut as that made by a pair of shears, without any trace of dust or lint.

Further, the Langston Shear Cut principle means that every roll is cut all the way through. The cut is continuous every inch of the way, clean through the paper from the outside to the center of the roll. No occasional breaks in the cut, which cause grief when it comes to separating the rolls, if not actual damage.

The more exacting the requirements your rolls must fulfill, the more you need a Langston.

SAMUEL M. LANGSTON COMPANY, Camden, New Jersey

LANGSTON 

SLITTERS

NATIONAL
ERIE FAST BROWN
GRP

A DIRECT dye characterized by excellent qualities for the coloring of all kinds of paper fibres and very distinctly adapted for blotting papers.

National Aniline & Chemical Co., Inc.
40 Rector St., New York, N. Y.

BOSTON CHICAGO PHILADELPHIA
PROVIDENCE CHARLOTTE SAN FRANCISCO
MONTREAL TORONTO

NATIONAL DYES

NATIONAL N DYES

PAPER TRADE JOURNAL
ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-SIXTH YEAR

Published Every Thursday by the

LOCKWOOD TRADE JOURNAL CO., Inc.

LESLIE R. PALMER, President — GEO. S. MACDONALD, Vice-President & Treas. — F. K. HOPPIE, Secretary

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Chicago Office: Room 14, Suite 410, 123 West Madison St.

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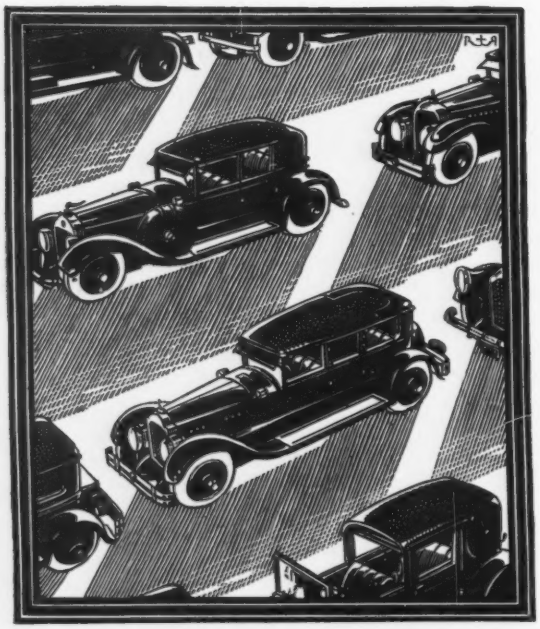
9 Cars *in* 4 Cities *in* 1 Day



A NEW BRITAIN, Connecticut, car dealer is said to sell more automobiles per capita, of a certain high-priced make, than any other subdealer in the world. In clearing his floor of trade-ins, he uses Long Distance almost exclusively. Not long ago he made ten calls in one day to dealers in other cities. These calls sold two cars in Boston. Two in Worcester. Three in New York. Two in Philadelphia. Cash transactions, $17,000—telephone charges, $19.50!

"I CONSIDER THE TELEPHONE," says this automobile man, "the most valuable and most economical sales asset I have."

Almost any business house has many kinds of work that the long distance lines can do. Buying or selling in a distant city without leaving one's office. Making important appointments. Getting or giving rush information, specifications or prices. All business details can be discussed by telephone, just as in a personal interview. And with heavy savings in time and traveling expense.

What distant person or firm would it be an advantage to talk with, now? You'll be surprised how little it will cost. . . . . *Number, please?*

BELL LONG DISTANCE SERVICE

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

Vol. LXXXV, No. 25 PAPER Thursday, December 22, 1927

Great Paper Plant Begins Operation in Quebec

Lord Rothermere, British Newspaper Owner, and President of the Anglo-Canadian Pulp & Paper Co., Throws Switch Starting Machinery—Output of 500 Tons of News Print Paper Daily Anticipated Early Next Year—Production to be Increased to 1,000 Tons Per Day as Requirements Develop—To Market Through Canadian News Print Co., Ltd.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., December 19, 1927.—Production commenced during the week in the mills of the Anglo-Canadian Pulp and Paper Company, and thereby a great new industry was added to Quebec City. The switch starting the machinery was thrown by the president of the company, Lord Rothermere, who is a brother of the late Lord Northcliffe and the chief proprietor of the London *Daily Mail, Daily Mirror, Evening News* and other English papers. The plant, which has been built entirely with English capital, has already entailed an expenditure of $7,000,000, and it is estimated that expansions will bring the total expenditure up to $15,000,000. The output is calculated to reach 500 tons of news print per day early in the new year, which will be increased to 1,000 tons per day, as requirements develop. The mills will employ 600 men, with an additional 2,000 employees in the woods.

The realization of the project is due to the enterprise of Frank W. Clarke, of the Clarke Steamship Company, who interested Lord Rothermere in the scheme and secured the timber leases, consisting of 2,260 square miles in the Manicouagan River Basin and 360 square miles in the Montmorency district, the condition of the leases being that the mill was to be constructed within eight miles of an existing city, and the choice fell upon the City of Quebec in competition with Three Rivers. Suitable arrangements as to civic taxes were made with the City of Quebec, and the mill site chosen was in Limoilou, where excellent facilities are provided for shipment of the paper, which is destined for Britain.

Mr. Clarke, who is vice-president of the company, has had much experience in the pulp and paper industry in Canada, and is president of the Gulf Pulp and Paper Company. The general manager is R. A. McInnis, and he has been responsible for plant construction and equipment installation. He was formerly general manager of the Abitibi Power and Paper Company at Iroquois Falls.

Construction of the mill was begun in November, 1926, and installation of machinery began in July of this year. The fact that production has begun approximately one year from the date of breaking ground is thought to constitute a record for a plant of this size. The mill is one of the first paper plants to use power developed at the head of the Saguenay River, which is brought to Quebec on one of the longest transmission lines in the world. The power is stepped down in the company's own plant from 165,000 volts to suit mill requirements.

The building is constructed on concrete pile foundations, and is of steel and brick with gypsum roofs. The paper machines were built by Walmsleys in their English shops.

The steam plant is modeled after the modern large central station plan with full automatic control and is the only 40-pound steam pressure plant in Canada. Steam at boiler pressure is first expanded through a steam turbine before delivery to process, thereby enabling electric power to be obtained as a by-product of process steam requirements. This installation is novel in that the turbine is designed to operate in parallel with purchased power, delivering power only as a by-product of the process. A similar plant is now under construction in London, England. To expedite the delivery of the finished product, electric trucks have been installed to carry the paper to the cars. The shipping sheds have been designed to accommodate 54 such cars.

Some interesting facts about the mill and its equipment are as follows:

Length of wharf, 1,350 feet.
Four paper machines, each 234 inches wide.
Height of sulphite tower, 225 feet.
Quantity of water pumped daily, 14,400,000 gallons.
Amount of sand to fill site, 1,800,000 yards.
Area reclaimed from tidal flats, 88 acres.
Difference between high and low tide at wharf, 21 feet.
Length of mill, 850 feet.
Width of mill, 580 feet.
Total length of concrete piles in foundations, 25 miles.
Power voltage, 165,000.
Power to be used to operate plant, 36,000 horse power.
Length of electric wiring, 150 miles.
Length of conduit piping, 60 miles.

Arrangements have been made to market the product of the mill through the Canadian News Print Company, which acts as selling agent for many of the larger Canadian news print mills.

Donnacona Control Passes to Canada

The Royal Securities Corporation of Montreal has acquired control from American interests of the Donnacona Paper Company, of Donnacona, Que., one of the largest independent producers in Canada. Owners of two-thirds of the stock have sent notice to other stockholders that they had agreed to sell their holdings to the Montreal company for $100 per share for common and $110 per share, plus dividend for preferred, payable January 10, on condition that the buyers shall also buy the remaining stock at the same price and on the same terms. The total stock is $1,500,000 common and $2,000,000 preferred.

The company's mills are situated at Donnacona, on the Jacques

(*Continued on page 26*)

Paper Demand Rules "Spotty" in Philadelphia

Local Market Conditions Complicated by Lower Values Recorded on Various Grades—Distributors Mostly Engaged in Disposing of Surplus Stocks Preparatory to Inventory Period—Corrugated Specialties and Containers Moving in Satisfactory Volume

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., December 19, 1927.—In a spotty year end market the paper trade is clearing up its stocks preparatory to inventory days. While the clearance sale of present stocks is on, the dealers are subjected to much cutting into values and competition among mills and distributors is so keen that marked inroads are made on the steady prices that have held throughout the year until the current month. Both fine papers and wrapping grades are being slashed in values in the eagerness to clear up stocks before the year's records are closed. Some of the dealers have been caught with materially higher priced grades of papers that are now being undersold by the mills seeking sufficient orders to keep operations at present speed throughout the early weeks of the new year and are, perforce, obliged to dispose of their earlier purchases at a considerable loss to meet the offerings that are now being made by the manufacturers to their competitors who were fortunate enough to have cleaned up at the higher quotations that prevailed in the preceding months. While cutting into values makes the market more complicated, dealers are moving along with the spotty demand that has marked the holiday trading. Present demands are confined to replacing depleted seasonable grades needed for holiday mercantile requirements and a few specialties used by food manufacturers who cater to Christmas shoppers. Corrugated specialties for packing and containers are active just now with holiday shopping at its height.

Book Papers Offered Below Fall Values

Book papers came under the price cut that a few weeks ago was effected in sulphite bonds. Prices on sulphites were one quarter cent below those of a month ago. There has been some price concession effective for several weeks on contract mill orders where volume buying of book papers was secured but inroads on small lot purchases became notable recently in order to clear up stocks on hand. Distributors expect that the lower prices predicted a few months ago when cheaper pulp importations were scheduled will prevail in sulphites for the early months of 1928 and that the present reductions are forerunners of the revised values to come. Dealers are anxious to dispose of their higher priced hold overs and are fitting quotations to those of the mills for the coming year.

Northern Mills Meet Southern Kraft Prices

Though southern mills set the pace in reduction of 1928 orders secured in early December, northern manufacturers are going further in reducing the price on krafts. One of the largest nationally known bag and paper corporations came into the market here last week with an attractive proposition on its krafts one quarter cent per pound below that of the southern made product and with the lower freight rate which it is able to provide there is another one quarter cent saved, a total of one half cent below previous offers from the south. Tissues, too, were 10 per cent below the preceding week. The reduction was effective in machine glazed, which is quoted lower than ordinary manila tissue.

Expect Dwindling Business

Larger distributors who have begun to take record of stocks on hand for the purpose of clearing up for the inventory season indicate that the closing of the books for 1927 will show a decided dwindling in values for a proportionate bulk of paper moving in the current year when compared to similar volume in 1926. It is expected that there will be shrinkage in values due to the slower pace of business in recent months and the present cut in prices against a brisker spring season. Many dealers have been caught with larger holdings of high price krafts, a commodity which has been the leader in the active grades of wrappings and coarse papers generally throughout the year. When recent prices are compared to those of last year at this season with relation to volume of paper shipments through the distributive trade, shrinkage will be correspondingly adjusted to smaller values for proportionate bulk. Paper stock drags along. Wholesalers in paper stock and rags do not look for further activity this year and are waiting for the mills to resume their interest in the market as soon as they have cleared out present stocks. Values have been slightly reduced from the higher quotations of last month despite the fact that few accumulations are on hand in warehouses among the commoner grades.

N. A. Schoenbocher Discusses Warehousing

A topic that in these days of small lot buying is of vital interest to paper distributors who must carry larger assortments of paper on hand through adequate warehousing facilities, occupied the attention of the members of the Philadelphia Paper Trade Association at the meeting held last Tuesday in the Bourse Restaurant, with N. A. Schoenbocher, the speaker on this important subject. Through special arrangements there was held a joint meeting of fine paper men with their brethren in the wrapping paper division for the purpose of hearing National Secretary Schoenbocher give first hand information on methods of warehousing with a view to economizing in overhead. He laid before the local paper men the experiences of other distributors scattered throughout the nation in their warehousing problems and took his audience through the various steps of costs and economies which might be effected through careful deliberation of this phase of trade practice. The national executive was introduced by President David Lindsay, Jr., of the Philadelphia Association and of the Lindsay Paper Company. There were forty members of the organization present and out of town representation of the firm of C. R. Andrews, paper dealers, Pittston, Pa., whose officials are enrolled in the local body.

John M. Driver Co. To Specialize In Cellophane

Equipped with a specially patented type of printing machinery of its own development the John M. Driver Company, Inc., Lancaster avenue and 57th street, is now able to concentrate upon the printing of cellophane specialties distributed through the trade for wrapping and bag purposes. The Driver plant recently removed to the newly constructed home occupies one of the largest of glassine manufacturing and converting buildings in this section and these facilities have been fitted to the printing and production of cellophane products allied with the use of glassine specialties. After several other firms experimented unsuccessfully with printing on cellophane to perfect a wrap that will permit of visibility of the object or merchandise enclosed, the Driver Company has succeeded in perfecting its printing devices so that the same effective printed designs that are now produced in glassine products may be similarly worked out in cellophane. In the coming year the firm intends to make this feature of its business its chief specialty and the cellophane wrappers and bags will be produced in large volume for the trade and allied industries. The firm will produce wrappers, for the mercantile and manufacturing industries featuring food wrappers, merchandise such as dry goods or notions, clothing and other wraps, box

wrappers and numerous other purposes. Already manufacturers of hardware are using printed cellophane wrappers to display their wares under rust and dust proof cover yet leaving the article visible for public inspection. The Driver firm has contracted with large manufacturers of small hardware such as garden tools and cutlery for its printed cellophane wrappers, a new field for supply to the consumer because of the fact that heretofore it has been impossible to obtain a covering that would fill the needs of preservation and leave the merchandise visible. With the perfection of printing equipment that will give three color designs in the same perfect workmanship that can be produced in glassine, the Driver Company expects the coming year to witness the extension of the use of cellophane for many purposes not heretofore covered in the conversion of glassine into wrappings and bag because of its special adaptability to covering articles that must be visible as well as protected in sales of merchandise. Since announcing the newest development of cellophane printing and its perfection through the use of special inks and equipment that give as clear designs as any other form of printed matter the Driver Company has been flooded with inquiries for wrappings and bags for the coming year. This leads the head of the firm, John M. Driver, to look for one of the most successful business developments in the history of his concern with the marketing of these wraps on an extensive scale.

National Waterproofing Co. Makes New Kraft

A new product in Machine Glazed Striped kraft has been developed by the National Waterproofing Company, with offices in the Drexel Building and plant in Camden. The new kraft is a duplex water proof paper that can be used for case linings wrapping purposes or for coverings where protection against moisture is advisable. The Machine Glazed waterproof kraft is to be a permanent line for the National Company and will be carried in stock in the Camden plant.

E. Latimer, Jr., Adds To Die Wiping Papers

Two additional grades of die wiping papers have been added to the lines manufactured by E. Latimer, Jr., under his own name and distributed through the headquarters at 126 N. 4th street. The latest of die wiping papers which have been developed by the firm are the Chamois and Economy, made in white and buff color. These grades are especially suitable for greeting card manufacturers where quantity production necessitates special strength and low cost in these commodities. The two grades added within recent weeks will give the Latimer company five lines of die wiping papers for the engraving, stationery, printing and greeting card industries.

Goldman Paper & Stock Co. Extends Converting Plant

With the addition of new slitters to its already large converting plant, the Goldman Paper and Stock Company, 414 S. Front street, has provided for the slitting of papers into a wider range of sizes. There has just been added two new Cameron Slitters, a 30 inch size already installed, and a 60 inch length which will be erected in the plant in a few days. These will augment the 84 inch slitter, of the same make, which has been operated ever since the converting department was opened shortly after the reorganization of the company five years ago. The Goldman company has just received six carloads of catalogue news print purchased from the Harrisville Paper Company, of New York. This consignment of mill paper is a special purchase which will be converted for the trade or consumer in the enlarged plant here. The Goldman company has also ordered several smaller mill lots which will shortly be shipped to the local plant for conversion into special sizes.

Association Appoints Nominating Committee

When the members of the Philadelphia Paper Trade Association met in quarterly session last Friday, President David Lindsay, Jr., announced the appointment of the Nominating Committee to nominate officers to be elected at the annual gathering to be held in January. These were appointed at the session held in the Chamber of Commerce:—Chairman Edward Walter, Wilcox, Walter Furlong Company; Simon Walter, S. Walter, Inc.; Irwin MeGargee, Curtis and Brothers, Inc., and Charles A. Wilder, Wilder Brothers.

Progressive Paper Co. Develops Tissue Department

Extensive lines of tissue papers are being stocked by the Progressive Paper Company, 266 S. American street, with specialties centered in the No. 1 grades. The Progressive company is now featuring these grades in carload lots. The firm also carries considerable quantities of No. 2 tissues in manila and white. Tissues for general use are now being stocked with a view to develop these trade wares as a leader in the business. The Progressive Company has been enlarged in coarse paper and specialty lines of distribution for several years, having recently removed to the South American street address for the purpose of securing larger warehousing facilities. The business is conducted by Samuel and Harry Clair and their sister, Miss Miriam Clair.

Wm. McGoldrick Offers Southern Kraft

Krafts made in the Moss Point Mills of Price & Pierce, Ltd., were being offered to the trade by the traveler from the southern plant of the pulp importing and paper manufacturing concern, William McGoldrick. Special offers were made for early 1928 orders of kraft made in Moss Point, Miss. The Moss Point Mills have a large distributive trade in the Philadelphia district where the krafts are stocked by many of the wrapping papers dealers. The mills are well booked with advance business for the coming year, local dealers having placed considerable demands for early shipments to replace depleted stocks in demand for the holidays.

Graphic Arts Exhibit For Paper Houses

With the return last week of the Graphic Arts Exhibit, which is compiled by the D. L. Ward Company, 28 S. 6th street, from the Direct Mail Convention recently held at the Stevens Hotel in Chicago it was announced that the display is now being prepared for a round of the paper trade in various parts of the nation. The Graphic Arts Exhibit is composed of 50 of the best specimens of printed matter featured during the past year in direct mail campaigns and selected by a committee of prominent master printers for outstanding features of the art of display printing and advertising copy. It will be sent to a list of paper firms after the first of the year. The exhibit has been on display in the Graphic Arts Room of the D. L. Ward Company for the past few months and previous to its loan to the Direct Mail Convention.

Goes With Stevens & Thompson Paper Co.

[FROM OUR REGULAR CORRESPONDENT]

HUDSON FALLS, N. Y., December 19, 1927.—Clayton D. DeMers has tendered his resignation as chief engineer at the plant of the Union Bag and Paper Company to become effective immediately. He has been connected with the concern in an executive capacity for the past twenty-one years and had made many friends who are wishing him success in his new business connections. He has accepted the position as consulting engineer with the Stevens & Thompson Paper Company, operating mills at Wallomsac, Greenwich and Hoosick Falls, assuming his new duties on December 1.

Mr. DeMers is prominent in political circles in this place and is now serving a term as Mayor. During his regime many improvements have been made while the expansion of paper manufacturing interests has also been noted. In his new connections Mr. DeMers said that he would first make a survey and then aid in the reorganization and rebuilding of the company's plants.

George S. Witham, Jr., who resigned as superintendent of the plant of the Union Bag and Paper Company recently, has also accepted a position as consulting engineer with the Stevens & Thompson Paper Company and will be associated with Mr. DeMers in the performance of his duties.

Paper Business "Marking Time" in Chicago

Increased Consumption of News Print Is Bright Particular Feature of Local Market—Box Board and Liner Board Continue in Excellent Demand, With Prices Steady—Fine Paper Market Moderately Active—Wrapping Paper in Good Shape

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., December 17, 1927.—Business in Chicago paper circles is more or less at a standstill now as paper merchants are marking time for 1928—and a new start. It seems to really be with a feeling of relief that Chicago paper houses are bidding the old year good bye. Few of them have been exactly satisfied with the year 1927 and, though the paper business is in fair shape, yet the progress expected failed to materialize. "We can say," said one Chicago merchant, "that it is a year we will be glad to get over with." The same merchant goes on to say however that he expects the coming year to show a marked improvement over the last.

There is a fair reason for this optimism for already paper houses are noting an action that seems to speak for results. Up in Detroit business took a rapid stride toward normal with the Ford plant getting under way again. In Cleveland the automobile accessories business is making the outlook better while other cities seem to think that a better year is coming. In Chicago a fair amount of building is going on and business in all quarters is declared due for a rise.

At the present time news print seems to be on the most stable basis with newspapers running a large quantity of holiday advertising. Increased production is finding a steady market. Book paper is fair and steady while the fine paper business is in only moderate circumstances with optimism the keynote of fine paper merchants—optimism and a feeling of relief that 1927 is running to a close.

No change in the fine paper market is expected, however, until January. Wrapping paper is in excellent shape. Box board and liner board are the two best features in the board market—both in very good shape, with prices steady.

Chicago Paper Association Banquet

Very little activity is noted in Chicago paper circles, the outstanding event being the banquet to be staged Monday evening by the Chicago Paper Association at the Bismarck Hotel, Chicago. Salesmen and executives and members of the Chicago branch of the Salesmen's Association of the Paper Industry are to be the guests of the association. The Chicago chapter of the Salesmen's association is a lively outfit under the inspirational leadership of men like "Jim" Coy, Walter Cox and George K. Gibson.

N. A. Schoenbucher's part in the interesting program has been noted in previous issues. Mr. Schoenbucher will return to Chicago Monday following an extensive trip during which he appeared for a number of local paper associations, in Milwaukee and in several eastern cities in the interests of the National Paper Trade Association. Mr. Schoenbucher will arrive in Chicago just in time to present his interesting lecture on Net Profit Control. A further interesting development in the program is the announcement that Quin Ryan, radio Announcer for WGN, the Chicago Tribune Station on the Drake Hotel, will be one of the speakers.

Paper Salesmanship Training Course

The Great Lakes Paper Company, of which J. Owen Lee is president, is busily engaged in preparing a very interesting training course of salesmanship for the paper industry. The course will be very complete including every phase of the industry, its history, details of manufacture, information about paper and twine and other valuable material calculated to produce a thorough understanding of the industry. Parts of this course and its essential features were presented before both the fine and wrapping paper divisions of the National Paper Trade Association at its meeting in Chicago this fall. Its presentation made an unqualified hit with those present. The course will consist of twelve text books, each containing about 25,000 words and will be written and prepared for publication by William Connelly.

News of the Trade

The thirtieth edition of "Westvaco," the book created by the West Virginia Pulp and Paper Company, has recently been sent out to the consumer trade. This last issue of "Inspiration for Printers" is the International Edition portraying beautiful examples of Swedish, Dutch, Swiss, Russian, Japanese, Spanish and Mexican work. For purposes of contrast and comparison the work is unsurpassed and the representative examples of decorative design and printing of these seven countries is indeed interesting and a credit to the West Virginia Pulp and Paper Company. The body of the book is printed on Sterling Enamel; pages on Inspiration Super, India, and Inspiration Super White stock are also included. The comparison of Pre-revolution Russian advertising and Soviet Russian work is interesting. It reflects the power of printing in showing the condition of a country.

More than fifty employees of Bradner Smith & Co. working at night to turn out Christmas boxes were driven from the building early Thursday morning when a fire broke out on the fifth floor of the building located at 333 Des Plaines street. It is reported that the fire started in a pile of boxes and waste paper. Damage was estimated at about $2,000.

The E-Z Opener Bag Company, Decatur, Illinois, has come to an agreement with the Chamber of Commerce of Tuscaloosa, Alabama, that will permit the immediate construction of the first unit of a paper mill in the Alabama city. The plant will be a pulp and paper mill and will be the largest in Alabama and one of the largest in the world. It will be used to manufacture paper and paper bags following the patents of the E-Z Opener Bag Company. It is reported that the total cost of the mill will be $6,000,000.

Walter E. Dwight, president of Dwight Brothers Paper Company, Chicago, is having a wonderful time on his four months vacation through the Caribbean countries and at his own winter home in Florida, according to reports from Mr. Dwight's office. Mr. Dwight left Chicago December 1 and recently left Havana for Jamaica where he will spend Christmas Day. He will then return to Naples, Florida, where his winter home is located. On March 15 he expects to come northward to Asheville, North Carolina, and thence to Chicago. One of Mr. Dwight's hobbies is golf. He is also an enthusiastic collector of shells and has spent some time in Key West following this interesting study.

The Swigart Paper Company has issued an attractive sample line of Georgian papers produced in various colors, weights and sizes.

J. B. Riley, formerly with the International Paper Company, New York City, has recently identified himself with the Central Paper Company, Muskegon, Mich. Mr. Riley has not been actively engaged in the paper business for one year, having retired for that length of time. He will continue to keep his home in the East, at least for a time, and will commute back and forth from the East to Grand Rapids.

The Irwin Paper Company, Quincy, Ill., recently celebrated its 40th anniversary with an appropriate announcement to the trade. The announcement set forth the principles on which the Irwin Paper Company was founded and the efforts it has made to please the trade during forty years of business experience.

Put a Vickery Doctor on EVERY roll

Breast Rolls
Wire Rolls
Press Rolls
Smoothing Rolls
Dryers
Yankee or M. G. Dryers
Calender Rolls
Super-Calender Rolls
Sizing Rolls
Coating Rolls
Cooling Rolls
Jacket Couch Rolls

They'll all do their bit toward making uniformly good paper continuously and with less trouble when they're equipped with Vickery Doctors.

BIRD MACHINE COMPANY, South Walpole, Massachusetts

1496

Great Lakes Paper Mill Nearing Completion

New Plant at Fort William, Ont., Will Eventually Have Capacity of 550 Tons of News Print Daily—Rossing Plant Added to Equipment of Detroit Sulphite Co., at West Fort William—Yards Have Storage Capacity of 35,000 Cords of Pulp Wood

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., December 19, 1927.—The Great Lakes Paper Company, which is building a news print mill at Fort William, Ont., will have when completed one of the largest plants in the country. The capacity is 550 tons of news print daily. It was in June, 1924, that the present ground wood mill started operations and up to the time of commencing the extensions which are well under way, this mill has operated continuously with a capacity of 160 tons daily. At present the property is a seething hive of industry, hundreds of men working in shifts throughout the 24 hours every day, rushing to completion one of the greatest industrial developments that has ever been seen at the head of the Great Lakes.

Paper Company Gets New Charter

A federal charter has been granted to the Hodge-Sherriff Paper Company, Ltd., to take over the business of the Hodge-Sherriff Paper Company, now carried on in Toronto and Montreal. The authorized capital is $150,000, and the headquarters are in Montreal. The firm, which has been in existence as a partnership for many years, under its new charter is empowered to buy, sell and deal in pulp, paper, etc. The company is the sales agent in Canada and England for the Wayagamack Pulp and Paper Company, Three Rivers.

Small Fire Losses in Ontario

The fire loss of Ontario's timber wealth during the year just closing was only 35,000 acres, according to a statement made by the Hon. William Finlayson, Minister of Lands and Forests. Only a few years ago the annual loss in the province amounted to 2,000,000 acres. The great reduction in the sweep of the fire fiend has been brought about by more effective protective service, the extension of fire-fighting facilities and the aerial survey patrol. It is planned to further the safeguarding of the forest areas in Northern Ontario to a greater degree than ever by securing more planes and equipment.

Pulp Wood Camp Operator Fined

J. E. Kallio, of Port Arthur, Ont., who operates pulpwood camps at Black Bay, was recently charged with three infractions of the Provincial Health Act, covering companies operating in unorganized territory. The information was laid by Provincial Inspector W. C. Millar, of the Ontario Department of Health. Kallio was found guilty of all three charges by Magistrate O'Brien and ordered to pay a fine of $10 for each of the three infractions. The magistrate told the accused that the public health laws, which he had broken, were made for the comfort and care of working men in camps and the authorities intended seeing that they were enforced.

Dr. Sparks, district health officer, gave evidence of hearing Inspector Millar warn Kallio over a month ago as to what would happen to him if he persisted in ignoring the health laws in his camps. The accused was severely reprimanded by the magistrate for making threats against Inspector Millar while in the court room. The maximum penalty for the breaking of each of the regulations under which the accused was fined, is $500 for the first offense.

High Honor for Toronto Man

James W. Johnson, of the Faculty of Forestry, University of Toronto, was recently awarded the Overseas Post-graduate Scholarship for Ontario, offered by the Imperial Order, Daughters of the Empire, in connection with the War Memorial of the Order. Mr. Johnson will enter the Imperial School of Forestry, Oxford University, England, and continue his research work in a field in which he has already attained marked success as a student of the senior class. In awarding the scholarship the Order aims to assist the movement toward the conservation of Canada's wooded wealth, the necessity for trained men for this purpose being recognized. Dean Howe, of the Faculty of Forestry, paid a warm tribute to Mr. Johnson.

Timber Limits Sold

Timber limits in the districts of Temiskaming and Nipissing were disposed of recently by the Ontario Government upon terms which mean an ultimate revenue exceeding $60,000 for the Department of Lands and Forests. The larger limit is situated in the townships of Hunter and McCraney, in the district of Nipissing. For this J. D. McNeil, of Kearney, was the successful tenderer. Approximately 6,375,000 feet of birch, maple, elm and ash are contained by the area, and a price of $9 per thousand feet, board measure, was realized for these. A price of $7 per thousand feet was secured for some hemlock on the area, and of $11 per thousand feet for some spruce and balsam. The sale means approximately $56,000 to the Government in the matter of ultimate revenue.

The other limit was a small one in the township of Firstbrook, in the district of Temiskaming, for which W. E. Seed, of Cobalt, was the successful bidder. Competition for this limit was keen. The prices which secured it were as follows: $9.50 per thousand feet for red and white pine, and $7.55 per thousand feet for jackpine. These terms will cause the limit to yield about $4,000 in the matter of dues.

Taking Out Much Pulp Wood

Thomas Falls, of Port Arthur, Ont., who has been in business since 1907, is one of the most prominent timber contractors in the district. Much of his work he lets out to jobbers, from whom he obtains a good deal of the wood to fill his contracts. He operates camps at Shebandowan Lake and Edwards Island. This year he has taken out 100,000 ties for the Canadian Pacific Railway and has cut 30,000 cords of pulp wood in the district.

Rossing Plant Is Installed

A rossing plant has been added to the equipment of the Detroit Sulphite Company, which for eight years past has been in operation with yards at West Fort William, Ont., and offices in Port Arthur. Walter Laubengayer is the representative of the company. The company also has an electric loader, with a loading capacity of 400 cords an hour direct from the yards onto the barge or pulp wood carrier. Four of these are in commission, owned by the company. The yards at West Fort William have a storage capacity of 35,000 cords of pulp wood, which is shipped to Detroit, there to be manufactured into high-class paper, tissues, crepes and second sheets. The wood is obtained from contractors and farmers to the amount of from 20,000 to 40,000 cords in the season, according to the demand. Fifty men are employed at the plant, both summer and winter, and a vessel is moored at the yards during the winter to be loaded for export the following spring. For wood and in wages the company pays out from $700,000 to $1,000,000 annually.

Broke:—

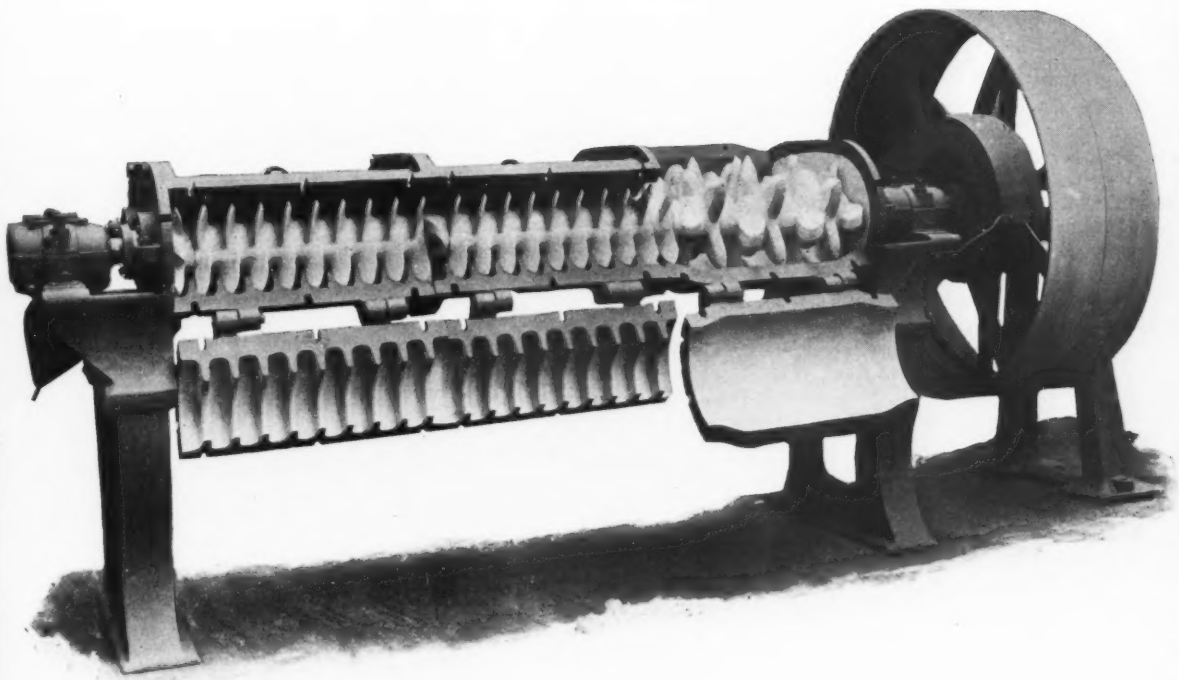
the dread of every paper maker!

It cannot always be prevented

But

It can easily and profitably be converted and put into a condition for immediate re-use through the installation of a

Voith Kneader



We shall be glad to supply full particulars

American Voith Contact Company, Inc.

280 Madison Ave. **New York**

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

St. Paul, Minn.—The Waldorf Paper Products Company, Myrtle Street and Pillsbury avenue, has completed plans for a new addition to its mill, to provide for large increase in present output. A new power house will also be built. The entire project is expected to cost close to $700,000, with machinery. It is purposed to ask bids on general contract at once.

Los Angeles, Cal.—The Schumacher Wallboard Company, 5721 South San Pedro street, manufacturer of special board products, has completed arrangements for the erection of a new addition to its plant at location noted, to be one-story, 42x550 feet, reported to cost in excess of $60,000, with equipment. A general contract has been let to the Austin Company of California, Inc., 777 East Washington street, and work will be placed under way at once.

Kalamazoo, Mich.—The Kalamazoo Vegetable Parchment Company has engaged Billingham & Cobb, Pythian Building, architects and engineers, to prepare plans for proposed additional units in connection with a general expansion and improvement program, recently announced, estimated to cost close to $1,500,000, with equipment. It is understood that plans will be ready for bids next spring.

Dayton, Ohio—The United States Corrugated Fibre Box Company, Martindale avenue, Indianapolis, Ind., will break ground for its proposed new local plant on Holmes avenue, near the Soldiers' Home, site purchased a few months ago, and proposes to have the unit ready for service early in the spring. It will be one-story, 125x300 feet, reported to cost in excess of $100,000, with machinery. General contract has been let to the Danis-Hunt Company, First and Webb streets, Dayton.

Chicago, Ill.—G. Felsenthal & Son, 1407 Hudson avenue, manufacturer of advertising novelties, paper and other specialties, has completed plans for the erection of a new two-story plant at 4110-18 Grand avenue, to be 85x120 feet, reported to cost about $65,000, with equipment. A building permit has been issued. Alfred S. Alschuler, Steger Building, is architect.

New York, N. Y.—Hefter & Company, Inc., care of Burnstine & Geist, 276 Fifth avenue, New York, representatives, recently organized with capital of $100,000, plans the operation of a local plant for the manufacture of paper boxes and containers. It is proposed to begin work at an early date. The incorporators are M. St. G. Osborne and Mellye Schneider.

Waterville, Me.—The Keyes Fibre Company has completed plans for the construction of a new building at its local mill, to be used primarily for laboratory and experimental service. It will be two-story, 80x150 feet, brick and steel, reported to cost in excess of $50,000, with equipment. A general building contract has been let to Morton C. Tuttle Company, Park Square Building, Boston, Mass.

Monroe, Mich.—The Consolidated Paper Company has engaged Forster & Wernet, Nicholas Building, Toledo, Ohio, architects and engineers, to prepare plans for its proposed new mill addition, recently announced, to be five-story, 200x700 feet, reported to cost close to $450,000, with machinery. It is understood that bids will be asked on general contract early in the year. H. Lee Rauch is vice-president and general manager.

Hammond, Ind.—The Commercial Wallpaper Mill, Inc., Ogden Boulevard and Talman avenue, has concluded negotiations for the purchase of a 4-acre tract of land near Calumet avenue, Hammond, on the line of the Indiana Harbor Belt Railway, improved with a two-story and basement building, totaling close to 120,000 square feet of floor space. The new owner will make alterations in the structure, and will occupy it as a new branch plant. It is proposed to install machinery early in January, to allow for a capacity of about 500,000 rolls per month. The installation will include grounding and rolling machines, printing machinery and sample book equipment, and is reported to cost more than $100,000. It is understood that the company will maintain its present mill at Chicago.

Marine City, Mich.—J. M. Gould, Hastings, Mich., representing a paper manufacturing company, name temporarily withheld, is said to be negotiating for the purchase of the local plant of the Independent Sugar Company, fronting on the St. Clair River, to be remodeled and equipped for a paper mill. The property is located on 30-acre tract of land. The sugar company has been out of business for some time, during which the mill has been idle.

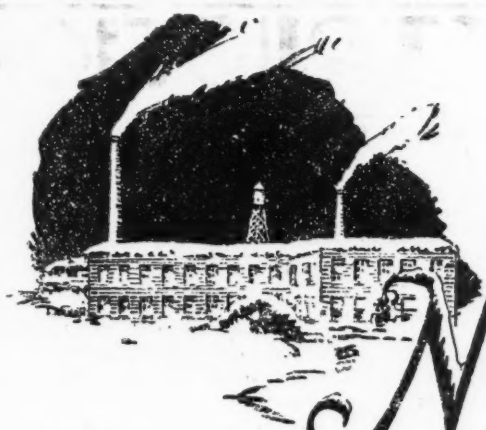
Van Wert, Ohio—The Container Company, 2604 Albion street, Toledo, Ohio, manufacturer of paper and other containers, boxes, etc., has completed plans for the construction of a new factory at Van Wert, Ohio, where tract of land has been selected on the line of the Cincinnati-Northern Railroad. It will be one-story, reported to cost more than $50,000, with equipment. General building contract has been let to the Indiana Engineering & Construction Company, Fort Wayne, Ind., H. A. Eggers is president.

Kalamazoo, Mich.—The plant and stock of the Lambooy Label and Wrapper Company, Kalamazoo, has been acquired by new interests headed by O. W. Pendergast, Terra Haute, Ind., and associates. No announcement has been made regarding continuance of operations at the plant, but it is understood that the business will be continued.

New York, N. Y.—The Elder Paper Company, Inc., care of Jerome Eisner, 366 Broadway, New York, attorney, recently formed with capital of 100 shares of stock, no par value, plans the operation of a local plant for the manufacture of paper bags, labels, and kindred products. Clyde V. Santee is one of the heads of the company.

Utica, N. Y.—The Donnacona Paper Company, Ltd., headed by Francis K. Kernan, Utica, and associates, including H. P. Gould, Lyons Falls, N. Y., president, has negotiations under way with the Royal Securities Corporation, Ltd., Montreal, Que., for the sale of its mill property at Donnacona, Que., comprising sulphite pulp and news paper unit. The purchasing company is said to be planning to continue full operations at the mill and will likely carry out an expansion program.

Ocean Falls, B. C.—The Pacific Paper Mills, Ltd., Ocean Falls, is reported to be considering the construction of a new mill



Now they will cash-in on their investment

THOSE MILLS THAT PREPARED FOR COLD WEATHER WITH BRINER ECONOMIZERS

There would be no such steadily growing number of installations as we can point to if Briner Economizers were not considered an investment—rather than an expense. In the face of lowering market prices and narrowing profit margins, the volume of installation orders for Briner Economizers show the greatest gain.

Spending some money to save more money is good business—sound investing. And keen mill managers know that Briner Economizers not only pay for themselves from savings they secure—but continue to pay real dividends on the investment long after.

Now, with the increasing need for heat, Briner Economizers will effect huge savings by reclaiming and utilizing heat in waste vapor from machines, without large amounts of extra steam.

J. O. ROSS ENGINEERING CORPORATION

208 W. Washington Street CHICAGO — Main Office 30 E. 42nd Street, NEW YORK — 1117 Tacoma Avenue TACOMA, WASH.

ROSS ENGINEERING OF CANADA, LIMITED
NEW BIRKS BLDG., MONTREAL

ROSS SYSTEMS
HEATING—VENTILATING—DRYING

near Campbell River, B. C., for the production of news print, comprising several units to be equipped for an output of close to 1,000 tons per day. The project is reported to cost more than $2,500,000, including equipment.

Hobart, Tasmania—A paper manufacturing company in the vicinity of Sydney, Australia, is said to be planning the construction of a new mill on large tract of land about 40 miles from Hobart, to be used for the production of news print, with a new process for the utilization of hardwood for pulp production. The project will consist of pulp mill and paper-making units, and is reported to cost more than $1,000,000. Information at the office of the Bureau of Foreign and Domestic Commerce, Washington, D. C., reference Australia, No. 35X, and also, at the American Consulate, Sydney, E. C. Squire, trade commissioner.

New Companies, Etc.

New York, N. Y.—Rutley Paper Company, Inc., has been incorporated with capital of $20,000, to manufacture paper products, wood pulp, etc. The incorporators are Bernard H. Legunn, and George Weisbred, 1440 Broadway, New York. The last noted is representative.

Detroit, Mich.—The Ajax Printing and Paper Supply Company, Inc., has been incorporated with nominal capital of $3,000, to deal in paper bags and other paper goods. The incorporators are Leo, Samuel and Ernestine Rovin, 3002 Sturtevant avenue, Detroit.

South Lee, Mass.—The Hurlbut Paper Company has been incorporated with a capital of 300 shares of stock, no par value, to manufacture paper goods. Paul C. Zuhike is president and treasurer, with headquarters at 320 Broadway, New York.

Chicago, Ill.—Tattershall's, Inc., 515 South Wells street, has been chartered with a capital of $25,000, to manufacture and deal in paper products. The incorporators are Judd S. Tattershall and T. O. Umbright.

Brooklyn, N. Y.—Sacks Sons' Carton Company, Inc., has been incorporated with a capital of $30,000, to manufacture and deal in packing boxes, cartons, etc. Meyer and Reuben Sacks, 54 Knickerbocker avenue, Brooklyn, are principal incorporators.

Newark, N. J.—The B. Engel Paper Box Company has been incorporated with a capital of 1,000 shares of stock, no par value, to manufacture paper boxes and containers. The incorporators are Benjamin Engel, Laurence and Meyer M. Semel, 123 Essex street, Newark. Last noted is representative.

Lowell, Mass.—The Merrimack Paper Tube Company, Inc., has been incorporated with a capital fo $50,000, to manufacture paper tubing and kindred products. Henry E. Cohen is president, and Nathan E. Cohen, 59 Ware street, Lowell, treasurer and representative.

Kansas City, Mo.—The Sleek-Warwick Paper Company, Broadway and Fifth street, has filed notice of increase in capital from $60,000 to $100,000, for general expansion.

Chicago, Ill.—The Tannenbaum Brothers Paper Company, 914 South California avenue, has been incorporated with a capital of $50,000, to manufacture and deal in paper products. Samuel and Isadore Tannenbaum are the principal incorporators.

St. Louis, Mo.—The Superior Paper Stock Company has been incorporated to deal in paper goods. The incorporators are Harry A. Hern, Harry Kramer and Louis Keetman, 1279 Oak Court avenue, St. Louis. Last noted is representative.

D. J. Burke Reelected

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., December 19, 1927.—For the fourth consecutive time D. J. Burke was elected president of the Hudson River Local of Pulp, Sulphite and Paper Mill Workers at the annual meeting this week. Other officers elected at the meeting were as follows: Vice president, Frank Merritt; secretary and treasurer, S. D. Warren; financial secretary, Harry Price; trustees, William Brown, Patrick Barry and Henry Greenwood. Vice President H. W. Sullivan, of Worcester, Mass., addressed the meeting on the labor movement.

GREAT PAPER PLANT STARTS

(*Continued from page 17*)

Cartier River, about thirty miles west of Quebec. The company has a productive capacity of 230 tons of news print paper per day, and has extensive water power holdings on the Jacques Cartier River, and controls approximately 6,000,000 cords of pulpwood mostly located on the Jacques Cartier and Sault au Mouton watersheds.

The Eddy Co. Rumors

From Ottawa it is reported that only the match manufacturing plant of the E. B. Eddy Company has been sold to the International Match Company. Rumors of the sale of the pulp and paper end of the plant to another company are afloat, but no definite information can be obtained. The rumors connect the International Paper Company with the deal, on the one hand, while on the other hand the Laurentide Company is mentioned. As to the latter President Chahoon says he knows nothing of such a proposal.

News of the Boston Paper Trade

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., December 17, 1927.—John Carter & Co., Inc., are issuing one of the first sample books of Old Deerfield Bond, made by the Millers Falls Paper Company, Millers Falls, Mass. Some of the sheets, as a distinctive feature, show the size of the envelope which also bears the letter head, the whole giving a decidedly pleasing effect. Another new feature is a page showing the stock sizes of envelops. This "Portfolio of Letterheads" contains 27 sample sheets in white, pink, gray, light blue, dark blue, green, peach, primrose, buff, goldenrod, russet, and white Linen Laid.

E. Stanley Burns, Jr., has been appointed sales manager of Stone and Andrew Company. Mr. Burns has been with the company for a considerable period and is well acquainted with the trade.

Gordon Blanchard and Walter E. Perry, of the Crocker-McElwain Company, Holyoke, Mass., called on the trade last week.

Swedish Pulp Market Not Satisfactory

WASHINGTON, D. C., December 21, 1927.—In spite of the satisfactory volume of sales, the Swedish pulp market continues depressed with a perceptible weakness in price, a condition for which the international paper market, particularly in the news print field, is held responsible, according to a report from Consul General John B. Osborne, at Stockholm.

Hope is expressed that the Canadian government will put a stop to further growth in news print production. Meantime, the formation of a joint sales organization is expected to improve conditions in the ground wood market. According to official reports approximately 70,000 metric tons of sulphite pulp was sold in October of which 10,500 tons were purchased for the rayon industry. Prices in European markets, however, showed a further decline in October, although quotations to American buyers continued firm.

Erie City Iron Works Publications

The Erie City Iron Works has recently issued several publications, copies of which may be obtained gratis by applying to the company at Erie, Pa.

"Some Fundamentals of Water Cooled Furnace Design," written by Prof. W. J. Wohlenberg gives a clear, concise understanding of the use of the outstanding types of water-cooled furnaces. Charts, data and illustrations combine to make this authoritative article of value to the engineer interested in getting the most out of pulverized coal.

"The Erie City Vortex Furnace" is the title of a leaflet which describes briefly a method of firing small water tube boilers and horizontal return tubular boilers with pulverized coal.

FOREIGN AND DOMESTIC
BLEACHED — UNBLEACHED
SULPHITES
KRAFT PULPS
GROUND WOOD

PERKINS-GOODWIN CO.
551 FIFTH AVE.
ESTABLISHED 1846
NEW YORK

PAPER
PRINTING PAPER
of
EVERY DESCRIPTION

New York Trade Jottings

Col. C. H. L. Jones, vice-president of the Spanish River Pulp and Paper Mills, Ltd., was a New York visitor last week.

* * *

Paul S. Hanway, statistician of the American Paper and Pulp Association, is visiting the leading waxed paper manufacturers.

* * *

The annual Christmas luncheon of the Binders Board Association was held at the Canadian Club, New York, on Tuesday, December 20.

* * *

Col. Percy B. Wilson, of the Canadian News Print Company, Ltd., Montreal, Que., spent several days in New York last week in the interest of this organization.

* * *

C. P. Winslow, director of the Forest Products Laboratory, Madison, Wis., renewed acquaintance with his friends in the New York paper industry, last week.

* * *

There was an excellent attendance at the weekly luncheon and meeting of the New York Division of the Salesmen's Association of the Paper Industry at the Canadian Club last Monday.

* * *

Dr. Hugh P. Baker, secretary of the American Paper and Pulp Association, addressed the Syracuse Association of Credit Men, Tuesday, December 13, on "The Pulp and Paper Industry."

* * *

James Rosenberg has opened an office at 246 Fifth avenue, New York, to act as sole selling representative for "Darag" Deutsch-Amerikanische Rohstoff Gesellschaft M. B. H., of Berlin, Germany, and for Aktiengesellschaft Marx Maier, Mannheim, Germany.

* * *

Ivan Sorvall, the well known pulp salesman, formerly with the Perkins-Goodwin Company and the E. M. Sergeant Company, is now connected with the wood pulp department of Daniel M. Hicks, Inc., dealers in paper mill supplies, of 200 Fifth avenue, New York.

* * *

Vice-president Nickenig of the New York Division of the Salesman's Association of the Paper Industry has appointed the following 1928 Banquet Committee: George H. Attfield, chairman, Eastern Manufacturing Company; Alan B. Helffrich, Orono Pulp and Paper Company; Harold H. Hopkins, Oxford Paper Company; S. C. Knode, Albemarle Paper Company, and G. R. Spies, Kalamazoo Vegetable Parchment Company.

* * *

Nicholas J. Barrett, of Thomas Barrett & Son, 402 West Broadway, New York, a well known paper merchant, was last week elected a vice-president of the Italian Savings Bank, now located in its new fifteen story building at Lafayette and Spring streets, New York. Mr. Barrett has been a member of the board of directors and chairman of its executive committee for a good many years. According to last reports, this bank has total resources of over $33,000,000.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, entertained the entire staff of the bureau to a Christmas dinner party at his residence, 31 Bailey avenue, Yonkers, N. Y., last Saturday night. During the course of the evening, George D. Bearce, formerly engineer of the bureau, was presented with a handsome travelling bag in appreciation of his long service and good work. A surprise announcement was made during the evening of the engagement of Miss Gladys Smith, of the bureau, and H. H. Worley, the office manager, who has been with the bureau since 1918. Needless to say, both these popular members of the bureau were the recipients of heartiest congratulations from their colleagues. Incidentally, gifts for all present were found on the artistic Christmas tree which adorned the occasion.

* * *

The International Paper Company has extended its offer to exchange its 7 per cent cumulative preferred stock for first and refunding mortgage 6½ per cent twenty-year sinking fund gold bonds, Series A, of Continental Paper and Bag Mills Corporation, to and including January 16, 1928. The International Paper Company made the exchange offer on November 1, 1927, conditional upon 90 per cent of its 7 per cent cumulative preferred stock being deposited with the Chase National Bank in the city of New York, as depositary, prior to December 15, 1927. The Chase Securities Corporation, Bankers' Trust Company, Redmond & Co., Continental National Company and the Union Trust Company, Cleveland, under a notice published recently, state that a substantial amount of these bonds has been deposited, but not enough to meet the requirements of the offer made by the International Paper Company, and that in the opinion of the bankers mentioned "it is to the best interests of the bondholders that they take advantage of this offer of International Paper Company."

* * *

At the annual meeting of the New York Association of Dealers in Paper Mill Supplies, Inc., in the Hotel Brevoort, last week, Joseph P. Gaccione, of Gaccione & Co., Inc., was re-elected president for the ensuing year. The Nominating Committee, consisting of Louis F. Darmstadt, George Carrizzo and Albert T. Hicks, proposed that all the officers who have served during the past year be retained for the coming year. Joseph Benedetto, of D. Benedetto, was re-elected vice president; Walter H. Martens, of George W. Millar & Co., Inc., treasurer, and Alfred J. Moran, of A. J. Moran & Co., Inc., secretary. The executive committee of the association, as elected, consists of the above four officers together with Louis F. Darmstadt, George Carrizzo, Michael Stramiello, J. J. Patricof, Joseph Carrano, James Mastronardi, Anthony S. Gaccione and Charles Passanante. All on the committee were re-elected with the exception of Mr. Passanante, who was chosen to take the place of Charles McBride, resigned. It was announced at the meeting that the annual banquet of the association will be given on the evening of February 22, 1928, in the Hotel Astor, New York.

Old Boston House to Incorporate

BOSTON, Mass., December 19, 1927.—Stimpson & Co., wholesale paper dealers, with its main office at 64 and 65 Chatham street, Boston, is to incorporate January 1, 1928, with a capital of $300,000. The following officers have been elected: President, William W. Jenks; vice-president, Alfred L. Gooch; treasurer, Willard H. Loud; secretary, Arthur M. Bartlett; assistant treasurer, William H. Tay; corporation counsel, Arthur L. Woodman.

Stimpson & Co. is one of the oldest established paper and twine houses in Boston, having started in 1856 as Binney & Lane, and in 1872 being changed to Binney & Stimpson; and in 1876 to Stimpson & Co. Mrs. I. B. Stimpson, sole owner of Stimpson & Co., since her husband's death in 1892, passed away on June 18, 1927.

The president, William W. Jenks, has been manager of the company for the last thirty-five years; Alfred L. Gooch has been with the company for twenty-six years; Willard H. Loud for ten years as assistant manager, and sixteen years prior with another Boston paper house; Mr. Bartlett has been with the company for twelve years, and Mr. Tay for thirty years.

The growth of this company speaks well for its worthy manager, William W. Jenks, for when he took charge of the company, it had only a worth of $48,000 and has since growth to the size shown by its present capital.

105 Mills Now Use-

VOITH Stock Inlets

USERS OF VOITH STOCK INLETS

Advance Bag & Paper Co.
Albemarle Paper Mfg. Co.
Algonquin Paper Corp.
American Writing Paper Co. (Geo. C. Gill Division)
Anglo-Newfoundland Development Co.
Bakelite Corporation.
Bedford Pulp & Paper Co.
Bemis Bros. Bag Co.
Bergstrom Paper Co.
Bird & Son.
Bogalusa Paper Co.
Brompton Pulp & Paper Co.
Brown Company.
Bryant Paper Co.
Central Paper Co.
Champion Coated Paper Co.
Champion Fibre Co.
Champion International Co.
Champion Paper Corporation.
Chillicothe Paper Co.
Cliff Paper Company.
Combined Locks Paper Co.
Consolidated Water Power & Paper Co.
Deerfield Glassine Co.
Dells Pulp & Paper Co.
Detroit Sulphite Pulp & Paper Co.
Diamond State Fibre Co.
Eastern Manufacturing Co.
Escanaba Paper Co.
Finch, Pruyn & Co.
Flambeau Paper Co.
Fletcher Paper Co.
Fort Frances Pulp & Paper Co.
Fort Howard Paper Co.
Fort William Pulp & Paper Co.
Frank Smith Paper Co.
Frazer Companies, Ltd.
Gould Paper Co.
Groveton Paper Co.
Hammermill Paper Co.
Hammersley Mfg. Co.
Hartford City Paper Co.
Hawley Pulp & Paper Co.
Hennepin Paper Co.
Hinde & Dauch Paper Co.
Holden Paper Co.
Hollingsworth & Whitney Co.
Hoskin Morainville Paper Co.
Howard Paper Co.
Howard Smith Paper Mills.
Hummel & Ross Fibre Co.
Inland Empire Paper Co.
International Paper Co.
Itasca Paper Co.
Jaite Company.
Jessup & Moore Co.
Kalamazoo-Vegetable Parchment Co.
Kimberly-Clark Co.
Lakeview Paper Co.
Manistique Pulp & Paper Co.
Marathon Paper Mills Co.
Marathon Paper Mills Co. (Carton Division).
Marinette & Menominee Paper Co.
Maxwell Paper Co.
Mead Pulp & Paper Co.
Manitoba Paper Co.
Miamisburg Paper Co.
Minnesota & Ontario Paper Co.
Mohawk Valley Paper Co.
Munising Paper Co.
National Paper Products Co.
Nekoosa-Edwards Paper Co.
Northern Paper Mills.
Northwest Paper Co.
Oswego Falls Corp.
P. H. Glatfelter Co.
Paterson Parchment Co.
Paul A. Sorg Paper Co.
Peerless Paper Co.
Port Huron Sulphite Pulp & Paper Co.
Price Brothers.
Provincial Paper Mills.
Rhinleander Paper Co.
Riverside Fibre & Paper Co.
Ryegate Paper Co.
St. Regis Paper Co.
Southern Paper Co.
Spanish River Pulp & Paper Co.
Spruce Falls Co., Ltd.
Thilmany Pulp & Paper Co.
Tomahawk Pulp & Paper Co.
Warren Mfg. Co.
Washington Pulp & Paper Co.
Watab Paper Co.
Watervliet Paper Co.
Waterway Paper Products Co.
Wausau Paper Mills.
Wausau Sulphate Fibre Co.
Westfield River Paper Co.
West Virginia Pulp & Paper Co.
Wisconsin River Pulp & Paper Co.
Wisconsin Tissue Mills.

THIS wide acceptance is proof that the Voith Stock Inlet is right—that it is a profit-making piece of equipment that goes on earning long after its original cost has been written off the books. It repeats because it performs.

In the 105 mills 225 installations—from 14 in one mill to 1 each for the other mills—are proving profitable. Easy to install and easy to operate, the Voith Inlet will produce better paper at a lower operating cost.

The Voith Inlet can now be equipped with our perfected Deckling-In Device for adjustment between deckles. With this device the operator can deckle-in while the machine is running—eliminating former inconveniences.

Let us show you why 105 mills have now installed and use 225 Voith Stock Inlets. Send for our special booklet with complete information. It is yours for the asking.

VALLEY IRON WORKS CO.

Machinery for Paper and Pulp Mills

APPLETON WISCONSIN

New York Office: 350 Madison Avenue

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Smith & Valley Iron Works Co., Portland, Oregon.

Power Plant Section

To Promote the Most Efficient and Economical Distribution of Power

Reducing Power Costs Through Unit Treatment

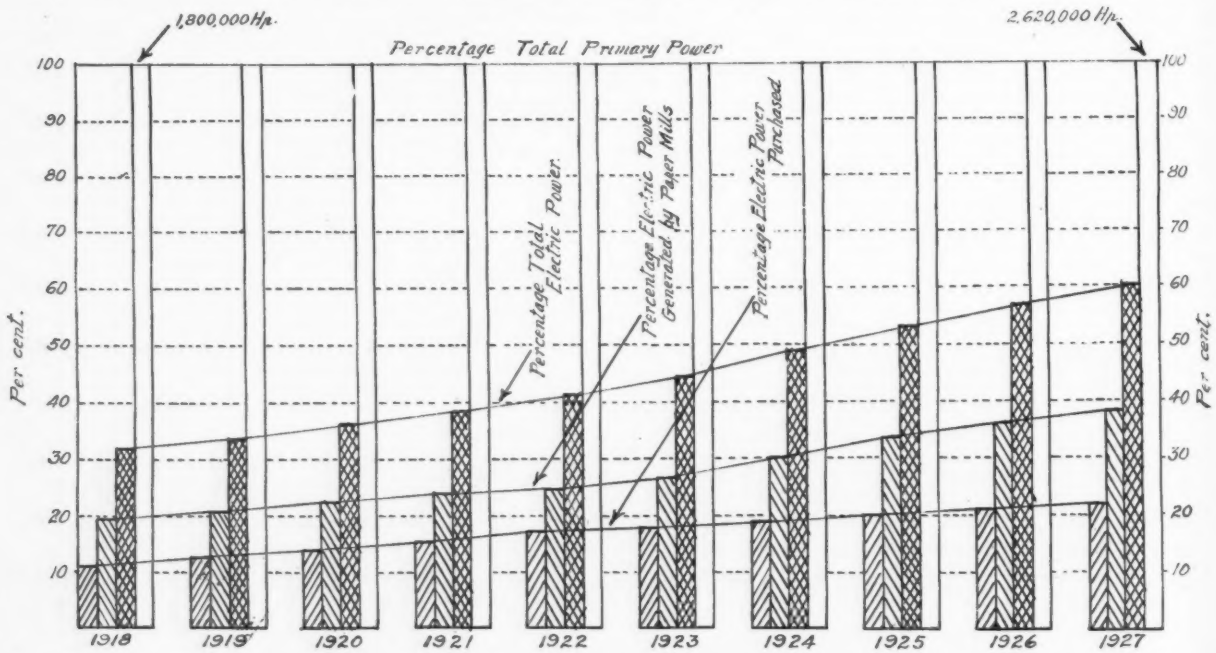
Conducted by REGINALD TRAUTSCHOLD, Consulting Engineer

Hydraulic Turbines Stimulate Pulp and Paper Mill Electrification

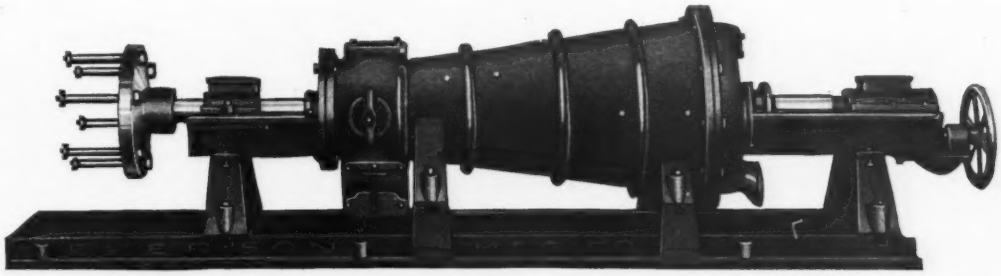
For the past six months, this department has been devoted to specific discussions of modern power plant equipment, to show, by the citation of experiences in particular mill installations, how power costs may be and are being reduced by the employment of modern equipment of demonstrated value in such service. Each instalment has been given over to some essential piece of equipment, device or accessory in one or another of the multiplicity of steps entailed in the generation and distribution of power in and about the paper mill.

This plan is to be continued and supplemented from time to time by a more general discussion of power conditions in the industry. In this way, it is believed that a keener appreciation of the importance of power in the production of pulp and paper can be formed and that it will be more apparent that the reduction of power costs can best be realized through what has been termed the "unit treatment." Such periodic reviews should also serve to direct contemplated mill expansions and new developments along the lines which economic pressure and the growing keenness in competition, that invariably accompanies the upbuilding of a great and essential industry and grows with it, indicate as being the most advisable.

The topic scheduled for the present discussion, hydraulic turbines, is one furthermore, which makes a preliminary review of power conditions in the industry both timely and appropriate. A hydraulic turbine, as it is looked upon today, is a highly important prime mover, an essential in hydro-electric developments, and focusses attention more upon a power supply than it does upon just a unit in power plant equipment. It does more than this, for, viewed from the angle of power supply, it strikes very close to possible vital modifications in paper mill practices. Also, a hydraulic turbine is more of the nature of engineering equipment than of power plant equipment, the distinction being that the former is a special device which has to be designed, built and installed to meet specific and individual engineering specifications, while the latter is more of the nature of standardized equipment, which while governed to some extent by individual requirements can to a much greater extent dictate these requirements. In other words, one is built for the job and the other is built by and ac-



PROGRESS IN ELECTRIFICATION OF THE PULP AND PAPER INDUSTRY, BY ENERGY PRIVATELY GENERATED AND PURCHASED ENERGY



EMERSON REFINERS

Used in Clifton Mill, Inspected by Superintendents

Some Special Emerson Refiner Features

Sliding Brass Gate, permitting removal of all foreign substances while Refiner continues in operation.
Means of quickly maintaining alignment of plug in shell.
Patented Flexible Coupling allows endwise movement of plug without changing position of motor. Alignment of plug shaft with motor shaft not necessary.

THE model plant of the Clifton Paper Mills at Clifton, N. J., recently visited by Superintendents of the Pennsylvania and New Jersey divisions of the Paper and Pulp Association, proved to be the *last word* in up-to-date Test and Container BOARD production. This board mill is equipped with all the newest and most improved machinery for economical and efficient operation.

The visitors had a chance to observe 3 Emerson Refiners and one other refiner of a well-known make. Since then a 4th Emerson Refiner has been installed; and a 5th Emerson Refiner has been ordered, and is now under construction in our works. All to be Motor Driven by Emerson Flexible Coupling, Direct Connection to Motor Shaft.

Here, as in many other instances, where Emerson Refiners have been operated side-by-side with other refiners, and the results carefully compared, subsequent orders have been placed for Emerson Refiners.

EMERSONS ARE BUILT TO DO YOUR WORK

The Most Service for the Least Cost
Since 1888

Emerson Beaters

When used in connection with Emerson Refiners, result in perfect "teamwork" all through this important stage of paper production. Emerson Beaters are built to meet *your* specific requirements.

When You Need a Roll or Plug Let Emerson Quote You

EMERSON MFG. COMPANY

LAWRENCE, MASS.

cording to modern manufacturing methods, the latter, naturally, being more of a standardized product.

That this distinction is a very live one and most potent is well illustrated by the experience of one of the best established and prominent of manufacturers well known as a builder of pumps and other varieties of hydraulic equipment. This concern attempted to standardize upon specific turbine designs, parts, settings, etc., to resolve the building of hydraulic turbines to a standardized manufacturing activity. It entered the field half a dozen years ago with a carefully selected organization, skilled engineers and designers well posted on hydraulic power problems and with marketing facilities and resources of the highest order, yet today this concern has withdrawn from the field and is no longer soliciting business, because it found that the building of hydraulic turbines along approved manufacturing lines did not pay.

Hydraulic Power Usually Entails Mill Electrification

The fact that the modern hydraulic turbine is in the full sense a prime mover and its installation entails heavy capital investment, notwithstanding the popular belief that hydraulic power is cheap, accentuates the problem of distributing its output economically. The turbine, of necessity, is situated in location to a water power so as to minimize dam construction, screen house, penstock and power house costs, etc., items which will account for 85 or 90 per cent of the total investment entailed and which cost from 75 to 100 per cent more than would a steam power plant of equivalent power capacity. The situation of the turbine is determined, furthermore, not by the location of the paper mill, as in the case of the steam power plant, but rather by the location of the water power. To transport the power it generates to the mill, consequently, entails an electric transmission line, for in no form can power be transmitted so cheaply as in the form of electric energy.

The adaptation of the hydraulic turbine as a prime mover in paper mill service, thus, introduces an electric transmission problem as well and, as a result, exerts powerful influence toward the electrification of the paper mill, so far as is feasible. This, of course, is in line with the universal modern trend of electrifying all industry and might attract no particular attention except for the fact that so much steam is employed in process operations in the paper industry that it is rarely appreciated how much dependence is even now placed upon electric energy by the paper making industry and, what is even more striking, how much of this electric energy is purchased by the mills from the public utilities of the country.

At the present time, the paper industry in the United States uses approximately 2,620,000 primary horsepower, or in power units, horsepower- or kilowatt-hours, almost as many as all of the public service electric light and power plants of the country developed fifteen years ago, or close to 14 or 15 per cent of the entire output of these utilities at the present time. As the electric service stations now supply between 35 and 40 per cent of all the industrial power employed in the country, some gauge is thus provided of the really stupendous amount of power now consumed by the pulp and paper industry.

Electric Energy in the Paper Industry

According to the compilations of the Bureau of Census of the Department of Commerce, for the decade ending with the current year, the primary horsepower of the pulp and paper industry, now about 2,620,000, was in 1918 not much more than two-thirds as much, some 1,800,000. This is a growth of approximately 50 per cent in ten years, so it is not hard to conceive that the paper industry now ranks well in fourth place among American industries in the use of power. What is somewhat startling, however, is the amount of these totals which represents electric power. In 1918, 31.65 per cent of all the power used in the pulp and paper industry was electric; today the proportion is about 60.4 per cent. Strides have certainly been made in electrifying the paper industry, and in spite of the industry's marked demands for steam in process operations.

A further study of the Government's statistics discloses the even more surprising fact that during these ten years in which the pulp and paper industry has made such great strides forward, there has been practically no difference from year to year in the proportional increases in the amounts of electric energy generated by the paper mills and that purchased by the mills from the electric utilities. The mean yearly averages for the ten years have been 62 per cent of all the electric power used privately generated and 38 per cent purchased from the electric service companies. This is particularly significant, for the constancy of the proportions over a period so critical in the development of both the paper industry and the electric public utilities can only mean that the paper industry has found, in very many instances, that it can buy electric energy at rates which compare favorably with what it would cost the paper mills to generate the power. There can be no other interpretation of the marked constancy in expansion with which the use of both privately generated and purchased electric energy has been distinguished during the past ten years.

In view of the fact that a goodly proportion of the pulp and paper mills, at least, are located in rural districts where there are streams and waterfalls within relatively short electric transmission range, this situation is certain to exert much influence on future developments in the paper industry. The location of these paper mills provides the opportunity of erecting hydro-electric plants under the most favorable of all conditions, where the load factor is kept abnormally high on account of the constancy of the uninterrupted power demands of the paper mill, or of patronizing utilities, which probably have cheap hydro-electric energy to market, under exceedingly favorable circumstances. So, more and more must be felt those advantages in the electrification of paper mills which have even now been recognized to the extent of the industry's depending upon electric energy for more than 60 per cent of the power it uses. A record established despite the claim that less than 10 per cent of the paper machines are as yet driven electrically.

In this connection, it is very pertinent that the National Electric Light Association, the official trade and technical organization of the electric public utilities, is at the present time making a thorough and extended survey of the extent to which purchased electric energy is being used by the paper mills of the country. When the report of the findings is complete, it will doubtless throw much light on the power situation in the pulp and paper industry and show in a most convincing manner the trend of developments controlled by the irresistible influences of economic pressure. A brief review of this report will appear in these columns.

Hydraulic Turbine Notes

Hydraulic turbines constituting very important prime movers in the economic generation of electric energy, when adequate water power is available, as it is in the vicinity of many of the pulp and paper industry developments throughout the country, it is obvious that such contrivances cannot well be discussed as if they represented simply units in power plant equipment. Where they are employed, they constitute the very heart of the power plant and can be selected only on the strength of intensive and extended engineering investigations. While such studies cannot be taken up in the present discussion, for they would be neither appropriate nor of sufficiently general nature to be of much value to even those paper mills which could undertake a hydro-electric development to advantage, nevertheless, some few hydraulic notes can be presented which may prove of general interest.

Two general types of hydraulic turbines are of outstanding interest, i.e., those of the reaction and impulse types, though there are numerous modifications, adaptations and combinations of the principles they entail. The former is characterized by the fact that the hydraulic pressure head is only partly transformed into

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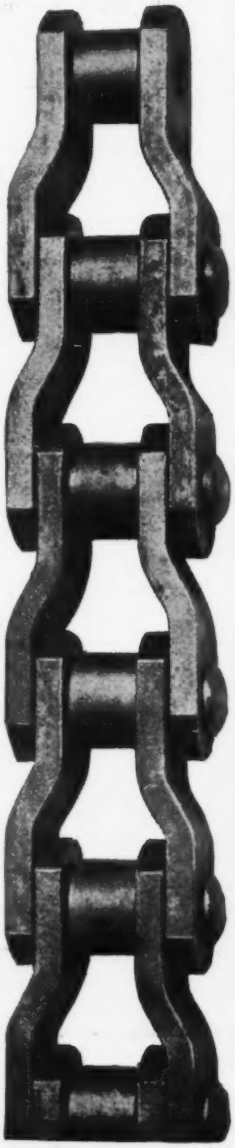

Jeffrey Steel Thimble Roller Chain for drives. Longer pitches for elevating and conveying.

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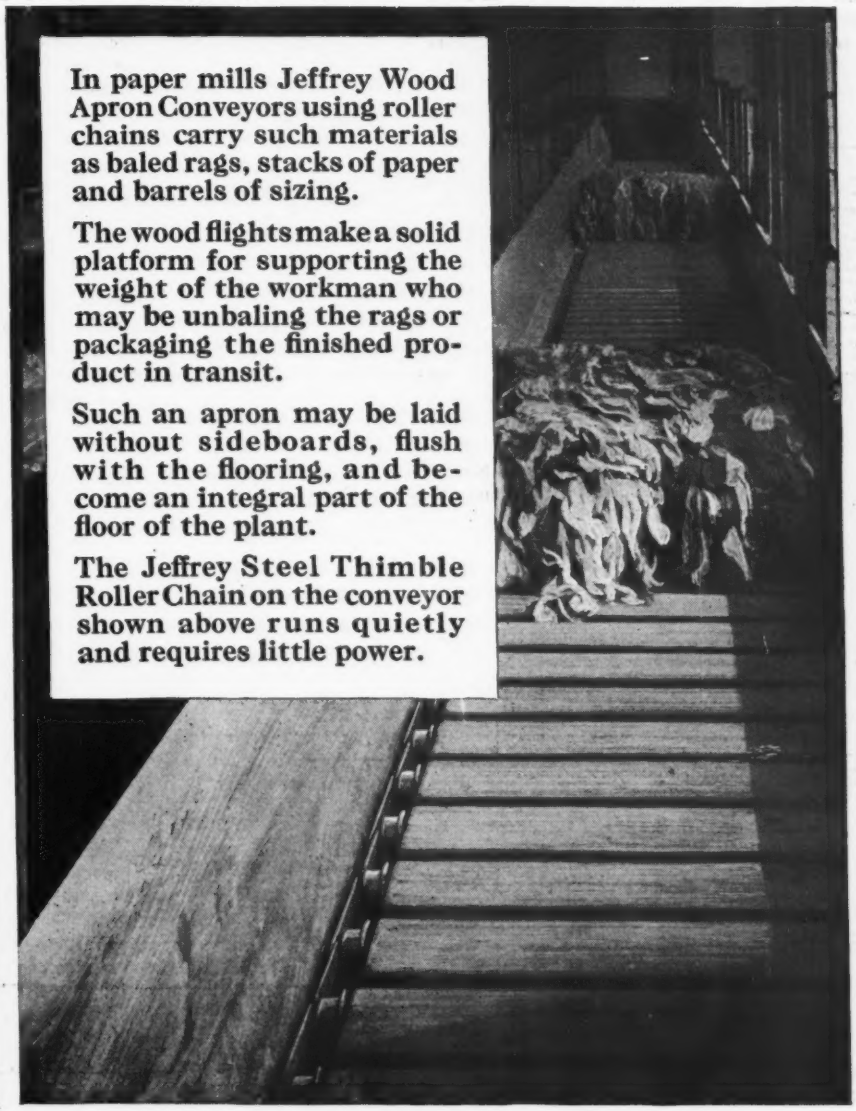

In paper mills Jeffrey Wood Apron Conveyors using roller chains carry such materials as baled rags, stacks of paper and barrels of sizing.

The wood flights make a solid platform for supporting the weight of the workman who may be unbaling the rags or packaging the finished product in transit.

Such an apron may be laid without sideboards, flush with the flooring, and become an integral part of the floor of the plant.

The Jeffrey Steel Thimble Roller Chain on the conveyor shown above runs quietly and requires little power.

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velocity in a stationary guide case by the turbine design, the latter by the fact that the hydraulic pressure head is transformed completely into velocity in a stationary nozzle acting upon the turbine runner. The impulse turbine revolves at a somewhat lower speed, for a given head, than does the reaction unit and its somewhat simpler in construction and design, making it preferable, usually, for high head installations and those with small discharge.

The turbines are set in either an open flume or an enclosed water passage, or penstock, the latter setting being necessary for impulse turbine wheels and for reaction turbine installations of medium and high head. The open flume setting is nearly always used for reaction turbines if the head is less than 25 or 30 feet, and when it proves less costly for the accommodation of reaction turbines operating under heads up to about 50 feet. General practice is to employ the open flume setting for reaction turbines of the vertical type up to heads of 30 feet and also for such turbines of the horizontal type up to heads of 50 feet.

Reaction turbines are suitable for heads as great as 600 feet, but for heads in excess of 50 feet, the penstock setting should be employed. Frequently, cost considerations make it advisable to employ the penstock setting with reaction turbines for heads as low as 20 feet. It is a question of cost between the limits of 20 and 50 foot heads. Impulse wheels, which are used almost exclusively for very high heads, from the limit for reaction turbines, 600 feet, to heads of several thousand feet, are also frequently used for heads of from 300 to 600 feet.

It may be well to touch also upon another consideration of great importance in the economical and efficient use of water power, and that is the speed regulation of hydraulic turbines. This differs from the speed regulation of a steam prime mover in three very essential respects. In the first place, very considerably more force is required to move the power-controlling mechanism of the hydraulic turbine, the water admission gates, than it does to regulate the steam supply to an engine or steam turbine. Second, the necessary adjustment of the water gates takes an appreciable period of time, to avoid the danger of destructive water-hammer produced by changing the velocity of large masses of water too rapidly. Finally, the adjustment of the water gates cannot immediately produce the desired effect upon the power output of the turbine, for the equilibrium of the hydraulic forces must be effected gradually. These exacting requirements place great importance upon the selection and use of an efficient and dependable type of hydraulic turbine governor, a most essential accessory to the turbine.

Hydraulic Power Costs

In spite of all the reputed economies of utilizing water power in the generation of electric energy, the paper mill contemplating a hydro-electric development, should appreciate first that the investment entailed will be considerably more than for a steam-electric development of like power capacity. For this reason, the attainment of the economies in power costs possible through use of hydro-electric power is dependent upon a continuous power service demand, i.e., upon a high load factor. Fortunately, such condition pertains to a very marked extent in the pulp and paper industry power requirements. In fact, if a mill's situation is such as to warrant undertaking a hydro-electric development to care for its power demands, an investment of two or three times that which would be entailed for a steam power plant of the same capacity is often well justified. It will probably save money in the long run.

The initial investment, of course, imposes the fixed charges, which in the case of a steam power plant constitute from 40 to 45 per cent of the total power cost of the energy developed, as against 85 or 90 per cent of the total cost of power in the case of a hydro-electric station. Expenses chargeable to operation, on the other hand, burden the steam plant to a much greater extent, the burdens expressed in percentages of the respective costs of power production being usually between 50 and 55 per cent in the case of the steam plant and not more than 5 or at most 10 per cent for the hydro-electric development. Maintenance is proportionally about the same in either type of power plant, as is also the usual expense of administration. If the power demand is sufficiently constant, as it certainly should be in paper mill service, the balance of these items soon favors dependence upon the hydro-electric station.

Exactly how much greater an investment per unit of generating capacity can be made in a hydro-electric station than in a steam power plant will depend upon the proximity of the hydro-electric development to the paper mill and upon the ability of the mill to supply its steam requirements at a sufficiently low unit rate not to encroach too much upon the margin between the power costs of the two types of power plants. In this respect the situation is not unlike that which exists in the case of the electric public utilities, so some indication of where to draw the line may be derived from experience in that great industry, where economy in the production of power is of the first importance.

The New England Power Company, for illustration, erected an automatic hydro-electric plant of 4,500 kilowatt installed capacity a few years ago at an overall cost per horsepower of very close to $325.00. It might have built a steam plant of the same installed capacity, but not of the automatic type, at an expense of from $100.00 to $125.00 per horsepower, yet the choice of the three times as costly hydro-electric station has proved a wise one and has turned out a more profitable investment than a steam plant would have proved. This is not an infallible guide, of course, but it is an indication of the economy of hydro-electric power when such development can be operated under conditions of high load factor.

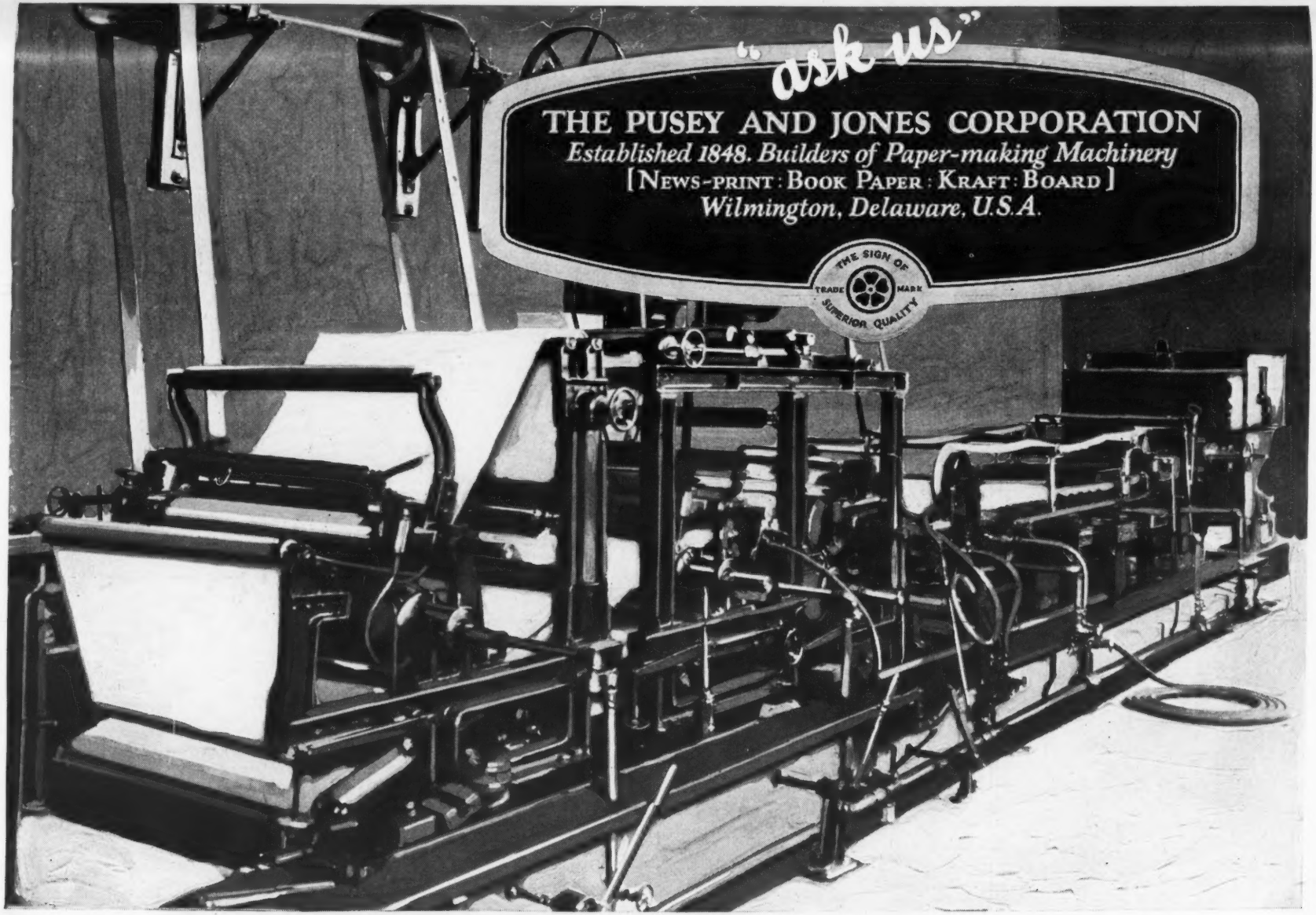
Provisions for Steam Supply

Advocates of hydro-electric developments for paper mill power requirements are always confronted, however, with the fact that the paper mill is faced with the need of a large and continuous supply of low pressure steam for process operations, for which purposes the exhaust from steam prime movers is used extensively. The economy of using steam only after it has first given up a proportion of its energy in driving power generating units is held to more than offset the sacrifice made in steam prime mover operation by running such units in non-condensing instead of condensing service. This is well established practice in paper mill operation, only now beginning to be infringed upon by the use of live steam bled to supply at least part of the steam requirements with higher pressure steam than heretofore considered economical.

The demand for process steam has also retarded the rate at which the paper industry has become electrified. Consequently, it is also the reason that more has not been done with hydraulic turbine prime movers in the paper mill power plant, the output of which power producers takes the form of electric energy to secure its economical distribution. A supplementary supply of steam is required. However, with relatively few exceptions a hydro-electric station loaded anywhere near capacity also requires a supplementary steam power plant to make up power when conditions of stream flow are such as to prevent the hydraulic turbines generating all necessary power.

Here lies the possibility of the future seeing considerable changes in the practices instigated by those paper mills which can derive their power requirements from hydro-electric developments of their own. The paper mill requires large amounts of steam for process operations. Dependence upon the average hydro-electric station is risky unless an auxiliary steam power plant is provided to care for the mill's power demands when the hydro-electric supply drops below normal requirements by virtue of drought, floods or other reason.

The paper mill and the hydro-electric station both require an adequate steam supply, one for process operations and the other for supplementary power service. The forward looking mills, those which seek full electrification, are interested in whether a single steam plant cannot be economically designed and operated so that it can, not only furnish the steam essential for the mill's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process operations, but in emergencies be drafted for the provision of adequate steam power to operate the mill without interruption due to insufficient hydro-electric power. Under certain conditions, such conciliation of the requirements for mill electrification and a supply of steam for process operations can be economically realized, particularly as with the rapidly growing maze of high tension transmission lines covering all sections of the country as the "Superpower" movement of electrifying America gathers impetus, it will soon be possible for the electrified pulp and paper mill to make up any deficiency in power supply by simply throwing a switch. All then required will be the adequate steam supply for process operations, a requirement which should not be difficult to provide without entailing increased production costs.

Under such circumstances, hydraulic turbines will be of the utmost importance to the paper industry. Today, these prime movers may be said to be exerting pressure toward and stimulating pulp and paper mill electrification.

Tacoma Electrochemical to Build at Tacoma

Announcement is made of the organization of the Tacoma Electrochemical Company on November 3, 1927, at Washington, Delaware, with authorized capital of one million dollars.

The Company has been registered in the State of Washington for the purpose of building and operating a chemical plant, and is also registered in the State of Pennsylvania, where Executive Offices will be maintained.

A large plot of ground has been secured within the limits of the City of Tacoma, which offers unusual facilities for shipment both by rail and water. Preliminary plans have been made, and after revision, construction work will be rushed, and it is expected that the plant will be in operation in the spring of 1928.

The first products will be liquid chlorine, and caustic soda, and later, other items.

The Pennsylvania Salt Manufacturing Company, of Philadelphia, will hold all of the capital stock of the Tacoma Electrochemical Company, and will provide funds for construction and operation. No bonds, or other securities will be issued.

The officers, directors, and staff of the Tacoma Electrochemical Company are identical with those of the Pennsylvania Salt Manufacturing Company, and construction will be supervised by present staff engineers.

Equipment will be similar to that in use at the Wyandotte, and Menominee plants of the Pennsylvania Salt Manufacturing Company, and the operating force will be organized from present employees.

The executive Offices will be located with those of the Pennsylvania Salt Manufacturing Company at 1000 Widener Building, Philadelphia, Pa., and temporary offices will be opened at Tacoma, Washington, in the near future.

There is a present demand for liquid chlorine in the vicinity of this new plant, and the owners believe there are excellent prospects for greatly increased consumption in the future.

The Pennsylvania Salt Manufacturing Company with a business record of seventy-seven years, holds a high position in the chemical indusry, and enjoys a most enviable reputation for prompt and reliable service.

It is believed that when the Tacoma plant is in full operation, the combined organization will be the largest producer of liquid chlorine in the world.

Consolidated Paper Co. Builds

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., December 12, 1927.—The Consolidated Paper Company, Monroe, has started the erection of a three story and basement building, which will cost about $500,000 when completed. It will be of concrete and steel construction, 200 feet wide and 700 feet long. It will house a garage in the basement, a shipping room on the first floor and a printing department on the top floor.

Paper Technologist Club Meets

KALAMAZOO, Mich., December 19, 1927.—The third regular meeting of the Paper Technologists' Club was held at the Columbia Hotel Wednesday evening, December 7. Following the dinner, roll was called showing twenty-nine men present.

The Research Committee reported through Messrs. Cox and Whittington on recent literature covering the researches in the relation between the moisture in various grades of paper and changes in the relative humidity.

The treasurer brought up the question of the finances required by the Club for the miscellaneous appropriations such as postage, dinners for outside speakers and room charges. A suggestion to ask the Valley mills to become corporate members was turned down. Harry Bradford presented a motion that the Technologists' Club accept an appropriation made by the local branch of the Cost and Technical Association in support of finances. The motion was seconded and voted upon in due form and was passed. The treasurer was requested to present a budget showing the costs of running the organization during the past year and also to prepare a budget for the coming year.

V. S. Heinmuller presented a motion for the appointment of a committee to arrange for joint meetings at least once a year by the Cost and Technical Association, the Superintendents' Association and the Paper Technologists' Club. This motion was seconded and passed. Mr. Milham and Mr. Libby were appointed as members of this committee.

Mr. Bradford announced the next meeting of the Cost and Technical Association to be held December 29 at the Columbia Hotel, Chas. E. Torrence, Superintendent of Personnel at the Bryant Paper Company to discuss "Centralized Control Personnel" and Mr. Barton of the Michigan Paper Company to report on drying.

Mr. Whittington read his correspondence with Mr. McNaughton, Secretary of the Technical Association of the Pulp and Paper Industry, in which Mr. McNaughton requested that the Paper Technologists' Club affiliate as a section of TAPPI. It was moved by Mr. Dreshfield and seconded that this question be submitted to a committee composed of the chief chemists of the Club. At a meeting of this committee after adjournment, it was decided that the Club did not, at present, wish to affiliate with TAPPI.

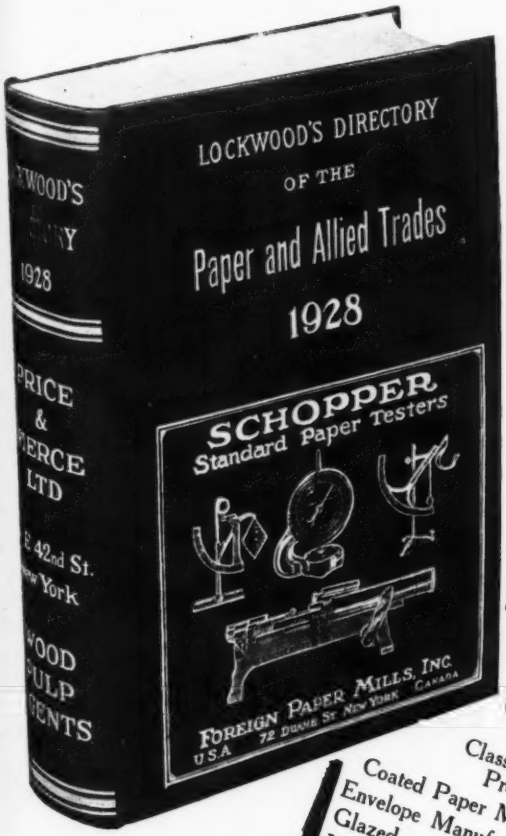
Mr. Lundbeck introduced the speaker of the evening James Boynton, of the Department of Chemistry of the Western State Teachers College, Kalamazoo. Mr. Boynton gave a very interesting presentation of the elementary theory underlying hydrogen ion concentration, indicators and buffer solutions. So clearly did Mr. Boynton present his topic that everyone agreed that more information was obtained during his brief talk than could be obtained by the average individual in hours of study.

Following Mr. Boynton, discussion lead by Messrs. Libby and Milham brought out the application of Hydrogen-ion concentration especially by the use of indicators as colormetric standards. Hydrogen-ion concentration finds use in the paper mills in sizing, cutting casein, cooking pulp, sewerage treatment, flocculation and chlorination of water and possibly has an effect on the relationship between clay retention and hydrogen ion concentration. Mr. Whittington reported that he had reviewed recent literature on the relationship between Hydrogen ion concentration and the degree of hydration of cellulose fibers but delayed the report until the next meeting.

High Water Closes Pulp and Paper Mills

[FROM OUR REGULAR CORRESPONDENT]

OSWEGO, N. Y., December 17, 1927.—Pulp and paper mills in Oswego, Fulton, and other places along the Oswego River have been forced to close down because of the high water of the past few weeks. High water conditions along the Oswego and other rivers are said to be the worst ever experienced at this time of the year.



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Vol. LXXXV New York, December 22, 1927 No. 25

MERRY CHRISTMAS

Another year is rapidly growing to a close. The spirit of Christmas is in the air. This is visualized decidedly by the numerous handsome cards and other little timely expressions of good will that are constantly reaching this office. We appreciate all of these very greatly and hereby return our sincere thanks for them. While the year just closing has not perhaps been altogether as satisfactory in the paper industry as was 1926, it has been a fairly good one as far as material prosperity is concerned, and this prosperity promises to continue and not unlikely increase during the year which is just about to begin. So the members of the paper fraternity have much to be thankful for and it should be a Merry Christmas for them. That it will really be such and that the New Year will bring much additional prosperity is the earnest wish of the PAPER TRADE JOURNAL to all its good friends wherever they may be.

FOREIGN PAPER DEMAND IMPROVES

Exports of paper and paper products from the United States picked up rapidly after the summer's dullness, October shipments exceeding those of the preceding month by 12 per cent and of August by 11 per cent, according to the Paper Division of the Department of Commerce.

Newsprint exports improved but little and are about 50 per cent under the amount going abroad at this time of last year. There was also a falling off in shipments of book, writing, boxboard, and bag shipments, compared with the previous month but losses in these lines were more than offset by increase in other classes, and especially in shipments of wrapping, surface-coat, and sheathing papers, boxes, wall boards, and miscellaneous paper and straw boards.

Compared with a year ago, October shipments show only a slight gain in aggregate value. With the exception of writing and surface-coated papers and boxes, exports of the leading items are inclined to show a downward trend, losses ranging from 15 per cent in the case of wrapping paper to 30 per cent for book papers and 50 per cent for newsprint. On the other hand, shipments of most of the minor items including paper specialties increased.

Total shipments of paper and paper products during October were valued at $2,281,757 as compared with $1,942,729 during September and $2,204,989 during October 1926. In addition to paper and paper products $448,699 worth of paper base stocks were exported during October consisting largely of sulphite wood pulp and rags and similar waste stock.

Imports of paper and paper products increased slightly during October both as compared with the preceding month and with the corresponding month last year. The most noteworthy change occurred in imports of wrapping papers, which were nearly double those of September and exceeded the October, 1926, receipts by 270 per cent. Much smaller gains were also registered in surface-coated papers, cigarette papers, and boxes, while imports of writing, tissue, and printing papers other than newsprint dropped below those of either of the other two months under discussion. Imports of newsprint, which constitute the bulk of this class of imports, showed a slight gain during October. Total receipts of paper and paper products were valued at $13,051,890, of which $11,609,610 represented newsprint and $1,442,280 other classes of paper and paper products.

No outstanding changes are observable in receipts of paper base stocks. Imports of pulpwood during October fell 20 per cent under those of the preceding month and 30 per cent under October, 1926. Receipts of woodpulp and other base stocks were slightly larger than during September, owing to increases in incoming shipments of sulphite pulp and rags. Total receipts were valued at $9,851,185 comprising $7,849,835 worth of woodpulp, $1,039,172 worth of pulpwood, and $962,178 worth of rags and similar stocks. By volume, 139,662 tons of woodpulp, 22,499 tons of rags, old rope, paper waste, etc., and 99,567 cords of pulpwood were received from foreign countries during October.

HORSEPOWER IN THE U. S. A.

The extent of the industrial development of a nation, which is the modern measure of its civilization, can probably be gauged best by the extent of its use of mechanical energy. For this reason it is interesting to compare the extent to which the water-power resources of various countries have been utilized and the progress which is being made in building new plants. In both respects, according to an estimate made by the Department of the Interior through the Geological Survey, the United States leads all other countries of the world, and in the capacity of its constructed plants it nearly equals all Europe. The total for the United States at the end of 1926 was 11,700,000 horsepower for plants of 100 horsepower or more, as against 13,100,000 horsepower in Europe, presumably for plants of all sizes. In the six-year period 1921 to 1926 the capacity of constructed plants in the United States of 100 horsepower or more increased 3,800,000 horsepower, while in Europe the increase in plants of all sizes was 4,200,000 horsepower. During the last three years of that period, however, the rate of increase in the United States was much greater than during the first three years, whereas the rate of increase in Europ showed a decline. The leading countries in Europe in the use of water power and the capacity in horsepower of their constructed plants in 1926 are as follows: Italy, 2,300,000;

France, 2,000,000; Norway, 1,900,000; Switzerland, 1,850,000; Sweden, 1,350,000.

The developed water power of Africa amounts to only about 14,000 horsepower, but Japan has built plants aggregating 1,750,000 horsepower, and India 200,000 horsepower. New Zealanad has some large plants under construction, but those completed have a capacity of 60,000 horsepower. The Dutch Islands of Java, Sumatra, and Celebes have plants of 80,000 horsepower. Tasmania's plants have a capacity of 75,000 horsepower. Australia depends mostly on fuel plants and has utilized only 2,000 horsepower of its water-power resources.

In South America, Brazil leads the other countries by a wide margin, with 500,000 horsepower, most of it used in Rio de Janeiro and Sao Paulo. Chile's plants amount to 114,000 horsepower, and Peru's to 55,000 horsepower.

Coming back to North America we find that Mexico has plants with a capacity of 300,000 horsepower. A large part of this capacity is in plants supplying Mexico City and there is not much activity in building new plants. Newfoundland has a large new plant for the manufacture of paper that increases its total to 160,000 horsepower. But the only real competitor of the United States in the whole world is our neighbor Canada, whose plants had a total capacity of 4,556,000 horsepower at the end of 1926, an increase of 2,138,000 horsepower since 1920.

At the end of 1926 the developed water power of the world was as follows: North America, 16,800,000 horsepower; South America, 750,000; Europe, 13,100,000; Asia, 2,100,000; Africa, 14,000; Oceanica, 240,000; total of 33,000,000. As the total capacity of the water-power plants of the world in 1920 was 23,000,000 horsepower, there was an increase of 43 per cent in the six years.

I. P. Start First Machine at Fort Edward

[FROM OUR REGULAR CORRESPONDENT]

FORT EDWARD, N. Y., December 5, 1927.—The first machine to be operated since reconstruction work at the plant of International Paper Company was started last spring has been placed in operation following a series of trial tests. The Domil Construction Company has been directing the improvements at the plant which entails a vast expenditure. The company is now making plans for increasing operations which will virtually double the production.

The company plans to manufacture high grades of paper and the entire output is to be changed from news print to book and bond paper. When in full operation with all machines running about 800 persons will be furnished steady employment. Although no definite date has been fixed for reopening the remainder of the plant it was said that the reconstruction program now under way would not be fully completed until next spring. Additional machines are being installed as rapidly as possible while the Domil Construction Company has all available workers pushing the expansion project to completion.

Brotherhood Election Results

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., December 17, 1927.—Additional results of the recent election of the International Brotherhood of Papermakers were annonnced this week by the board of canvassers. Joseph Addy, of Troy, was elected fifth vice president over Simeon Weir, of International Falls, Minn., by two votes.

A. F. McLeod, of Espanola, Ont., was elected delegate to the Dominion Trades Congress over Arthur D'Aoust of Hull, P. Q., by a majority of 110 votes. Mr. McLeod is one of the oldest Canadian officials of the Brotherhood.

Shartle Buys Griley-Unkle

Falling in line with the present tendencies of modern business—increased volume and lower overhead—the Shartle Brothers Machine Company, Division of the Black-Clawson Company, has purchased the Griley-Unkle Engineering Company, and already has merged the Indiana company with its own organization at Middletown, Ohio.

By taking over the Griley-Unkle Company and acquiring all its patents the Shartle Brothers Machine Company, it is said, now comes into exclusive control of all methods of continuous beating. The question of priority of patents and infringements has long been quite aggravated and for the past two years the situation has been fast approaching the point of involved litigation, and, undoubtedly, had it not been detrimental to the interests of the many friends and customers, the situation would have reached the courts before this time. The merger of these two companies brings together the two pioneers of continuous beatings. Charles W. Shartle was awarded the basic patents on continuous beating, the first patent merely covering the process of cutting a hole in the side of the beater and making the beater overflow. This patent was followed by several others, enlarging upon the overflow idea, and finally with the purchase of the Brownell-Buehler patents on the perforated backfall, the Shartle breaker was devised.

Charles W. Unkle developed his perforated hood, or extractor, at about the same time. His type of machine differed from Shartle's in that stock was taken from the roll through the hood instead of through the backfall. Both companies have been successful and great numbers of both types of extracting devices have been sold.

Besides the patents on the removal of pulp through the beater hood, the Shartle company has now come into the possession of all patents on the Murphy Junk Remover, the Unkle Roll Raiser, the Unkle System of Continuous Coloring, and also takes over the exclusive sales rights for the Hardinge Rod Mill, for the paper industry.

The organization of the Griley-Unkle Company has already been amalgamated with the Shartle Brothers Company, and its files, records and office equipment have been moved to Middletown. H. J. Andrews, president and general manager of the former company is now located in the Shartle offices, and will be in charge of sales of rod mills and all Griley-Unkle equipment, and will specialize in layouts of continuous beating system plants.

Z. W. Ranck To Visit Egypt

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio, December 12, 1927.—Z. W. Ranck, president of the Crystal Tissue Paper Company of Amanda, near Middletown, will leave about the first of the year for Egypt. He will be accompanied by his family.

Mr. Ranck has long contemplated a trip to Egypt and he looks forward to the journey with a great deal of pleasure, especially since the members of his family will accompany him. He recently made a trip to India and has delivered informal lectures and shown pictures of interest in connection with this trip.

Honoring Mr. Ranck, prior to his departure, several lodges and organizations to which the paper manufacturer belongs, have been entertaining in various ways.

To Superintend Kelso Paper Mill Plant

[FROM OUR REGULAR CORRESPONDENT]

PORTLAND, Ore., December 16, 1927.—Fred Karls has been named to act as superintendent of operations of the new Kelso Paper mill plant, mention of which construction has been previously made. The company has now decided definitely upon a site in Kelso, Wash., and will operate with a capital stock of $300,000, with an annual payroll of $100,000. P. J. Gallagher is president and Earl Knight is treasurer. Operation of the plant will probably start in six months.

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Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Edited by
RONALD G. MACDONALD, Secretary

The Thorne Bleaching Process

In bleaching high-grade pulp for the manufacture of rayon great care must be taken to eliminate as thoroughly as possible all the non-cellulosic impurities and at the same time to avoid over-bleaching, which reduces the alpha-cellulose content, the most valuable constituent from the standpoint of viscose manufacture. Kipawa sulphite has earned for itself an enviable reputation in this respect and the whole output of the Kipawa mill is now absorbed by the rayon industry.

The success of this pulp is in no small measure due to the manner in which it is bleached. The process was devised by C. B. Thorne, for many years manager of manufacturing for the Riordon Pulp and Paper Co., whose services were retained by International Paper when it acquired the Riordon assets. Mr. Thorne recently was granted three patents for various features of his process, by the United States Patent Office.

No. 1,634,388

Fig. 1 is a diagrammatic view showing the preferred form of carrying out the process;

Fig. 2 is a diagrammatic view of a modification of the apparatus used;

Fig. 3 is a detail view to a larger scale of the aerating tank used in Figure 1; and

Fig. 4 is a detail view to a larger scale of the aerating tank used in Fig. 2.

The mixer (5) is preferably formed of a casing, circular in cross section, having inlet (6) leading through the top of the small end and an outlet (7) leading through the bottom of the larger end. Adjacent the pulp inlet are the hot water inlet (8) and bleaching liquor inlet (9). The shaft (10) is journaled in the heads of the mixer and carries a pulley (11) by means of which it is driven from any suitable source of power. The paddles or agitator blades (12) project from the shaft within the mixer and are in staggered arrangement. This type of mixer prepares the pulp for the thorough penetration and distribution of the bleach, without destroying its physical properties, as is liable to happen under some conditions of handling, especially with pulp at a high consistency.

The bleach liquor head box (13) is at a higher level than the mixer is formed with the inlet (14) outlet (15) and overflow outlet (16), the inlet (14) being near the bottom and connected to the supply by the piping (17), the overflow (16) emptying through the piping (18) and the outlet (15) being connected by the piping (19) to the measuring box (20) and having the control valve (21) in the said piping.

The measuring box (20) is formed so as to empty the liquid at a predetermined level into the piping (22), which leads to the bleach liquor inlet (9) to the mixer (5), thus furnishing the bleach to the pulp just as it reaches the mixer. The hot water head box (23) is connected to a hot water supply by the piping (24) leading to the inlet at the upper end, the overflow outlet and piping (25) being adjacent and through the side wall. At the opposite end the piping (26) joins the head box (23) to a measuring box (27), which is connected to the hot water inlet (8) of the mixer (5) by the piping (28), thereby furnishing heat and water to accompany the bleach liquor to the pulp after it reaches the mixer.

The chute (29) leads from the mixer outlet (7) to the tank or tower (30), provided with inlet (31) at the upper and smaller end (32) and with outlet (33) at the center of the lower and larger end (34), from which the chute (35) leads to the combined washer and thickener (36). The outlet (38) of the washer and thickener communicates with the small end of the tapered mixer (39), which is provided with the agitator (40). This mixer communicates through chute (41) with tank (42), which empties into the mixer (44), which is connected by chute (45) to tank (46) having a chute leading eventually to the washer stock chest.

The vertical shaft (47) extends upwardly and centrally through the tanks (46), (42) and (30), and at its lower end is driven through the gears (49) and (50) rotated by the shaft (38) connected to a suitable motor. The shaft (47) is hollow and inside each tank has one or more outlets for air. At its upper end the shaft is connected to the stationary pipe (51) through the coupling (52), this stationary pipe (51) leading from a tank (53) fed from an air compressor (54).

The nozzle (55) extends from the sleeve (56), rigidly mounted on shaft (47), is provided with perforations (57) and is preferably curved. It rotates with the shaft, and as it passes through the dense pulp compressed air issues from the perforations at a high velocity and percolates through the pulp mass, driving out the accumulations of decomposition gases formed during bleaching. The nozzle (55) is preferably situated somewhat below the center of the tower, as shown.

The leveling arm (58) is a simple mechanical device for spreading the mass out evenly as it enters, much the same as would be done with any semi-plastic mass by means of a hand tool. This arm (58) extends from a sleeve (59) rigidly mounted on the shaft (47) and is preferably on the opposite side of the shaft (47) to the nozzle (55).

The scraper arm (60) is also curved and extends from the sleeve (61), preferably in the direction opposite to that of nozzle (55). It is intended to scrape the hopper bottom (34) and keep the pulp moving to the central outlet (33).

Figs. 2 and 4 illustrate square or rectangular tanks (62), re-

ceiving the pulp through inlet (63) and discharging it through chute (64). The air supply pipe (65) is connected to the horizontal air pipe (66) at the upper end and the nozzle pipes (67) extend downwards into the tank (62) and have the perforations (68) through which the compressed air flows into the pulp mass. The rotatable grate members (69) having the flange plates (70) projecting from the rotors (71) are journaled in the sides of the tank by means of the shafts (72) which rotate freely in their bearings. The provision of a primary mixer, bleaching liquor supply, hot water feed and washer and thickener is the same as for the rotating aerator.

In the operation of this plant the bleach and hot water are fed separately, but at the same time, into the mixer which stirs the dense mass of pulp, so that the pulp and bleach get a primary mixing aided by the heated water, which acts not only as a vehicle in promoting the flow of the bleach but brings the temperature to a proper degree for effiecient bleaching. The pulp progresses to the larger end of the mixer and passes out through the chute to the aerating tank which fills up and is kept levelled by the upper rotating arm. Intermediately the nozzle rotates through the mass and delivers air under pressure, thereby making the pulp mass

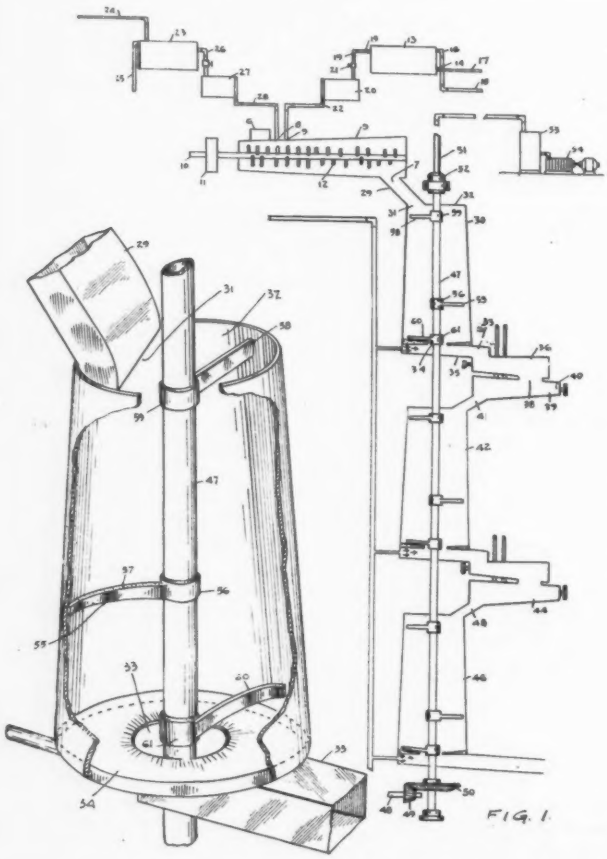


FIG. 1.

porous allowing a perfect distribution of the air and driving out the decomposition gases generated during the bleaching.

The aerated pulp is disturbed at the bottom of the tower by the scraper, which aids the discharge through the central outlet into the chute, whence it enters a combined washer and thickener and, if finished, passes on to the stock chest. But in most cases it will pass into another mixer and then to another tower, continuing this in as many stages as may be found necessary. The bleaching liquor and hot water are fed to each one of the mixers receiving the pulp from a washer and thickener, as the operation is just the same at each stage and is repeated until the condition of the pulp is satisfactory.

No. 1,642,978

This patent covers the process of bleaching pulp in the apparatus covered by the patent described above, and lays particular stress on the method of mixing and stirring the pulp and bleach

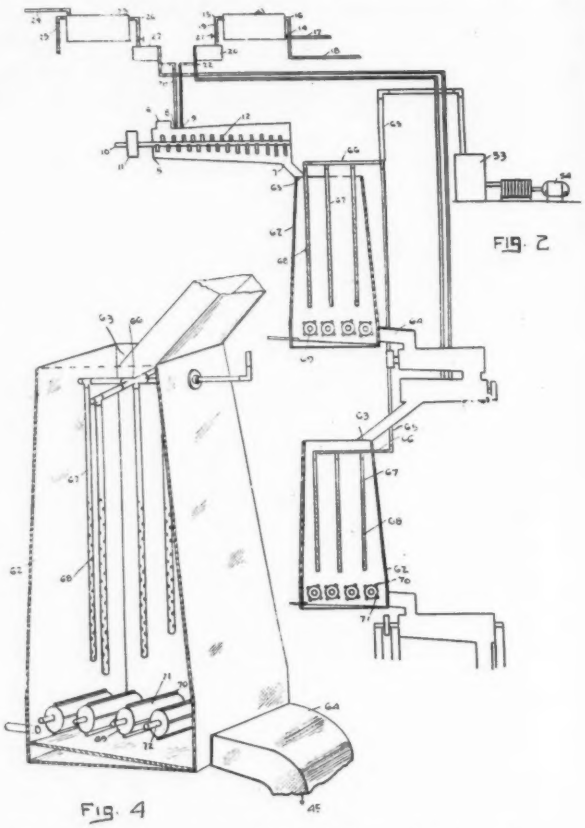


FIG. 2

FIG. 4

liquor. The manner in which this is carried out effects even distribution of the bleach throughout the pulp mass and intimate contact between the two, thereby eliminating the troubles inherent to uneven bleaching which results in the overbleaching of part of the fiber and at the same time does not completely remove the impurities. It is particularly efficient for the handling of pulp at a high density (about 17 per cent after addition of the bleach).

No. 1,643,566

The two main features of this patent are means for insuring a regular and uniform supply of pulp to the bleaching apparatus, and bleaching in two stages, the first at high density (15 to 20 per cent or more) and the second at low density (10 to 5 per cent or lower).

Fig. 1 is a diagrammatic view showing the system of feeding the high density pulp, bleaching agent and water in a continuous and uniform manner to the bleaching tower;

Fig. 2 is a diagrammatic view showing one arrangement for bleaching partly at high density and partly at low density; and

Fig. 3 is a diagrammatic view showing the new system of feeding combined with a system for bleaching partly at high density and partly at low density.

The supply of pulp flows through the passage (10) to a concentrator (11) where sufficient water is taken from the pulp to bring it up to the desired density. From the concentrator the pulp flows through the outlet passage (12) to the equalizer tower (13), the bottom of which is of the hopper type and inclined to a central outlet (15), around which the scraper arm (16) is rotated. The

arm (16) is mounted on a shaft (17) extending centrally and vertically through the tower (13) and is suitably driven at a uniform speed. The arm (16) rotating at a uniform speed keeps a continuous stream of high density pulp flowing to the opening (15) along the chute (18) to the mixer (19). The capacity of the equalizing tower (13) is such that it will produce a very uniform and even flow at its opening (15) irrespective of whether the flow of pulp preceding the equalizing tower is uniform or not.

The chute (18) leads the pulp from the outlet (15) to the mixer outlet (25). During its passage through the mixer, water and bleach are added through the pipes (20) and (21), respectively, from the supply tanks (22) and (23), which are fitted with the required flow boxes so that exact quantities of water and bleach can be continuously added. The pulp, bleach and water are mixed by the rotating paddles (24) and the resultant mixture discharges through the opening (25) along the chute (26) to the bleaching tower (27), the construction of which is identical with that of the tower described in patent No. 1,634,388. The only difference between the towers (13) and (27) lies in the absence of a leveling arm and compressed air nozzle in the equalizing tower.

Referring to Fig. 2, the pulp, after having been bleached at a high density in the tower (42), is washed in the receptacle (35), emptied into a suitable mixer (40) for a fresh mixing of the bleach and water, and then passed to a low density bleacher (41) of any desired type.

The process of bleaching in two stages, that is by partly bleaching at a high density and then completing the bleaching at a low density, gives an exceptionally high grade product, and apparently was unknown until it was applied at Kipawa where excellent results are being obtained by this process.—A. P.-C.

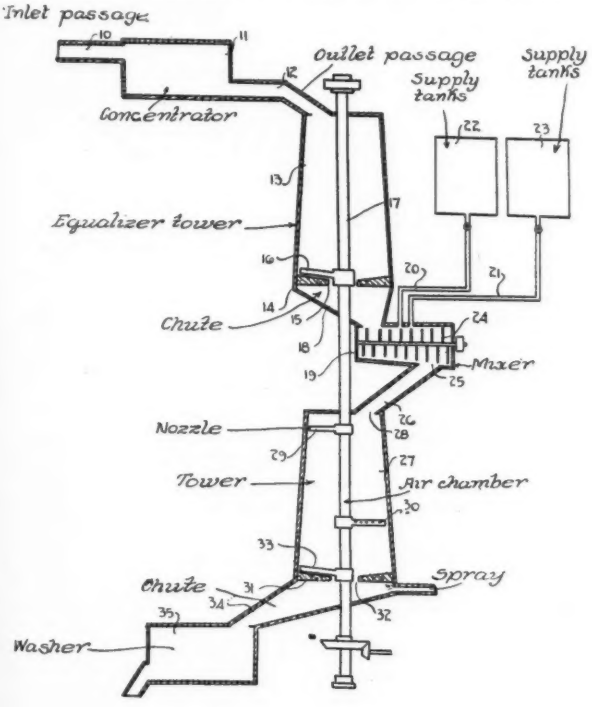
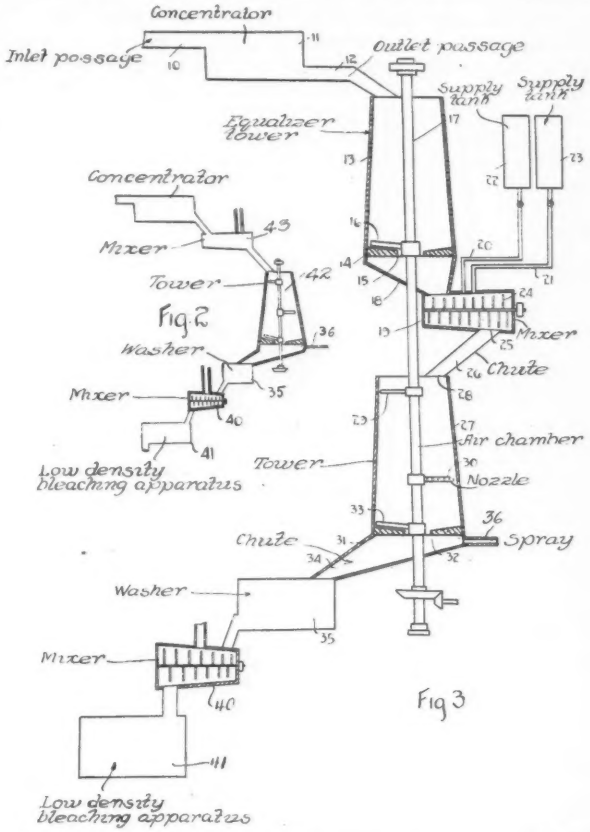


Fig 1

Metered Combustion Control

Metered Combustion Control as used at the Manchester street station of the United Electric Railways Co. of Providence, R. I., is described in a paper by A. S. Davis, Superintendent, which has been reprinted and is being distributed by the Leeds & Northrup Co., 4901 Stenton avenue, Philadelphia, Pa. The rate of combustion is regulated according to the steam demand by a master controller connected to the steam header so that it responds to drop in pressure due to flow of steam and sets up an electrical control current proportional thereto. This current cooperates



with control devices which actually meter the pulverized coal and the air supplied to burn it, to hold the two in a definite ratio and in proper amount to meet the steam demand. It is stated that the use of this equipment has resulted in more uniform steam pressure, and hence in more efficient operation of turbines, also in more uniform furnace conditions with lower excess air, resulting in higher boiler efficiency and lower furnace maintenance. Finally, the operators have been relieved of practically all of the physical work of operating the boiler, with the result that they are now able to pay closer attention to the finer details and to the better operation of the plant as a whole. Charts from recording instruments show a remarkably constant percentage of excess air and a uniform steam pressure, in spite of rapidly fluctuating steam flow incidental to load swings in a traction plant. The percentage of CO_2 is set to be maintained as high as is compatible with economical operation of the furnaces, taking into consideration maintenance, combustible in ash and combustible loss up the stack, as well as heat loss in flue gases.

Finland's Pulp and Paper Exports Increase

WASHINGTON, D. C., December 14, 1927.—In contrast to Norway and Sweden, Finland's exports of paper and pulp during the first ten months of the current year were above those of the corresponding period of last year. The heaviest increase occurred in shipments of mechanical ground wood, which rose from 59,194 metric tons to 81,868 tons. Exports of chemical pulp, amounting to 289,865 tons, and of paper amounting to 29,191 tons, were 10 per cent and 7 per cent respectively above last year's shipments.

Draining Steam-Heated Driers

The advent of high-speed paper machines, particularly for the manufacture of news print, has greatly increased the difficulty of draining the condensed steam from the drier rolls. After a certain speed has been reached, the water no longer collects in the bottom of the drier, but, owing to centrifugal force, it is distributed uniformly over the whole of the inside surface of the roll (except the heads), and the ordinary siphon pipes become inoperative. J. Melrose Arnot, the well-known English paper mill engineer, made an intensive study of this phenomenon and published an interesting account of his investigation some time ago. He put his findings to good account in the development of a new type of drier-roll drainer, for which he recently was granted United States patent No. 1,633,723 (June 28, 1927).

The apparatus consists of a curved flap or blade extending the whole length of the cylinder and having one edge bent to form a volute or scroll, its other parallel edge being plain. The blade and scroll together form a scoop at each end of the scroll part the scoop is mounted coaxially with the drier roll, and the scroll part communicates with an exhaust conduit extending to the exterior of the cylinder through the trunnion. At its free edge the scoop lies close to or lightly touches the wall of the cylinder.

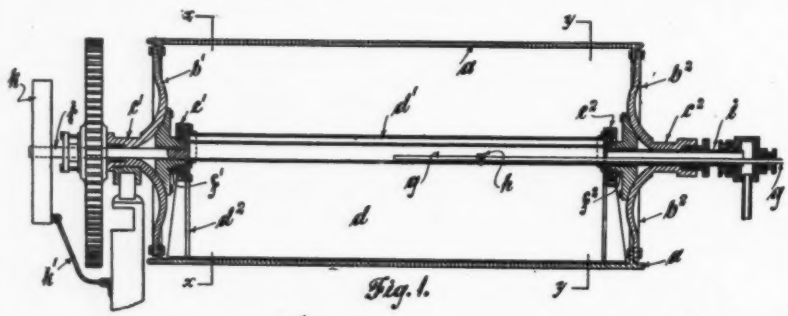


Fig. 1.

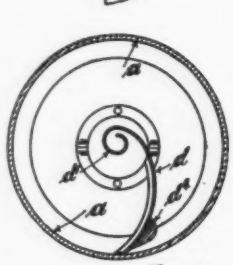


Fig. 2.

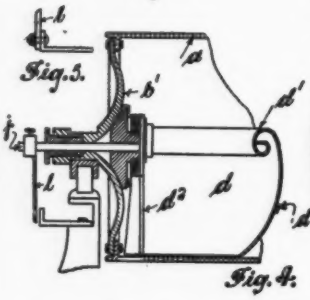


Fig. 4.

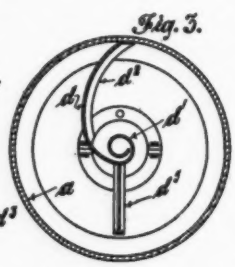


Fig. 3.

Fig. 1 illustrates a longitudinal section of a drying cylinder equipped with the device;

Fig. 2 is a cross section of Figure 1 on line x-x;

Fig. 3 is a cross section of a drying cylinder equipped with another form of the invention;

Fig. 4 is a longitudinal section of part of a drying cylinder with another form of the invention applied thereto;

Fig. 5 illustrates a modified detail.

(a) is the cylinder wall, (b^1), (b^2) are the heads and (c^1), (c^2) the trunions. (d) is the sheet metal scoop, having one edge formed into a volute or scroll (d^1), the other edge lying close to or touching the inner face of the cylinder wall (a). The scoop is supported at both ends by sheaves (e^1), (e^2) journaled on bosses (f^1), (f^2) secured to the heads of the cylinder. Between the bosses and sheaves are hardened steel balls or rollers and race rings to eliminate friction and thus ensure of the scoop remaining vertical in spite of the rotation of the cylinder, or to eliminate friction when the scoop is rotated. The scoop widens out towards its free edge in order to act on the full length of the cylinder, and each end is provided with a flange (d^2) to prevent the water escaping over the end.

Steam enters the cylinder by the pipe (g), which may be supported by a small eye-bracket (h) bolted to the scroll but loosely fitting the pipe. The water of condensation leaves the scroll by the pipe (i).

The weight of the scoop may itself be sufficient to cause it to remain stationary while the cylinder rotates, or an additional weight, such as a length of angle iron (d^3) (Figure 4), or a weight bar (d^4) (Figure 2) may be provided. Instead of relying on the weight of the scoop or added weight for holding it stationary, the scoop may be held stationary in any desired position by means exterior to the cylinder. For this purpose one of its sheaves may be provided with a shaft (j) extending through the trunnion and fitted, outside the cylinder, with a pulley (k) by which and a link (k^1) secured to the frame of the machine, the pulley, shaft and scoop are held locked against rotary motion. This same arrangement of pulley and shaft is used when requiring to rotate the scoop.

When the roll is rotated at such a speed that the water of condensation clings to the whole face through centrifugal force, the water is interrupted by the scoop and, urged by its centrifugal momentum, is caused to flow over the curved face of the scoop into the scroll part (d^1), whence, under the action of gravity or difference of pressure, it flows through the pipe (i) to the usual exhaust conduit outside the cylinder.

When the cylinder is rotated at a speed sufficiently slow to allow the condensed steam to collect in the lower part, the pulley (k) is released and a belt is applied to it to rotate the scoop in a direction opposite to the rotation of the cylinder, when at each rotation of the scoop the water is lifted by the scoop and conveyed by gravity to the scroll (d^1), whence it is discharged outside the cylinder through the pipe (i). If desired, the scoop may also be rotated when the cylinder is run at a high speed. To give an even turning movement, the scoop may be balanced either inside the cylinder by means of say an angle-iron from (d^3) (see Figure 3) or outside the cylinder.

When running the drier at high speed, the scoop may be held stationary at a point other than the lowest in the cylinder (see Figure 3).

In the case of a scoop which is to remain always stationary, a pointer (l) may be applied to the shaft (j) outside the cylinder (see Figure 4), which, moving over a stationary scale, will indicate the angular position of the scoop. This pointer, after indicating the position of the scoop, may be rigidly connected to the scale (see Fig. 5).—A. P.-C.

Port Huron Sulphite Co. To Expand

KALAMAZOO, Mich., December 19, 1927.—The Port Huron Sulphite and Paper Company, which some time ago inaugurated a campaign to increase its present production capacity about 35 per cent, has according to President E. W. Kiefer, decided to expand to the extent of 75 per cent. This is said to be due to the greatly increased volume of business. It was originally planned to expend $350,000. It will now require at least $500,000 to install all the improvements planned.

United States Patents on Papermaking

August 2 to October 4, 1927

Compiled by Clarence J. West, Chairman, Committee on Abstracts and Bibliography

1,637,353. Method of making sulphite cooking liquor. Geo. A. Richter, assignor to Brown Co. Berlin, N. H. Aug. 2, 1927. (Cl. 23—130).

1,637,514. Production of caustic alkali, etc. Linn Bradley and E. P. McKeefe, N. Y. C. Aug. 2, 1927. (Cl. 23—185).

1,637,515. Treatment of residual liquors. Linn Bradley and Edward P. McKeefe, assignor to Bradley McKeefe Corp., New York, Aug. 2, 1927. (Cl. 23—131).

1,637,532. Mold for forming containers. Wm. Harold Oliver and Edwin S. Culver, Oakland, Cal. Aug. 2, 1927. (Cl. 92—60).

1,637,547. Insulating material. Haughton Brown, Minneapolis, Minn. Aug. 2, 1927. (Cl. 154-45).

1,638,061. Method of dry distillation of alkalized waste liquor from the soda cellulose manufacture, Djursholmm, Sweden. Aug. 9, 1927. (Cl. 252—7).

1,638,298. Paper article method and apparatus. Carl A. Flood and John H. Gibbs, assignor to Dennison Mfg. Co., Framingham, Mass. Aug. 9, 1927. (Cl. 93—1).

1,638,299. Crepe-paper articles. Carl A. Flood and John H. Gibbs, assignors to Dennison Mfg. Co., Framingham, Mass. Aug. 9, 1927. (Cl. 41—25).

1,638,556. Process of making insulated conductors. Edmund B. Wheeler, assignor to Western Electric Co., Inc., New York City. Aug. 9, 1927. (Cl. 92—41).

1,638,563. Apparatus and method for packaging paper. Henry P. Carruth and Wm. C. Ludwig, assignors to The Mead Pulp & Paper Co., Dayton, O. Aug. 9, 1927. (Cl. 217—36)

1,638,721. Asbestos drier felt. Edward V. Asten, Eupen, Belgium. Aug. 9, 1927. (Cl. 28—1).

1,638,757. Paper-coloring device. Karl Wille and William Tieke. Aug. 9, 1927. (Cl. 91—43).

1,638,886. Method of bleaching wood pulp. Frederick G. Sherbondy and Max E. Boehm. Aug. 16, 1927. (Cl. 8—2).

1,638.965. Apparatus for bleaching wood pulp. Frederick G. Sherbondy and Max E. Boehm. Aug. 16, 1927. (Cl. 8—18).

1,638,975. Means for eliminating water from the pulp on the wire of paper-making machines. Victor Antoine, Lambermont, Belgium. Aug. 16, 1927. (Cl. 92—44).

1,638,992. Sulphur burner. Lowry Gillett, assignor to General Chemical Co., N. Y. C. Aug. 16, 1927. (Cl. 23—279).

1,639,010. Machine for making one-piece window envelopes. George W. Swift, Jr., Bordentown, N. J. Aug. 16, 1927. (Cl. 93—63).

1.639,080. Manufacture of stencil sheets. Alex. Brooking Davis, assignor to A. B. Dic. Co., Chicago, Ill. Aug. 16, 1927. (Cl. 41—38.6).

1.639,128. Process of manufacturing wall board. Sidney C. Clark, assignor to American Gypsum Co., Port Clinton, O. Aug. 16, 1927. (Cl. 154-2).

1,639.152. Process for elaborating corn stalks into pulp for use in paper making and the like. Orland Russell Sweeney, Ames, Aug. 16, 1927. (Cl. 92—5).

1.639.273. Screen. Harold J. Reed and Claude L. Spafford, assignors to Improved Paper Machinery Co., Nashua, N. H. Aug. 16, 1927. (Cl. 92—34).

1.639.281. Paper box and the like. Samuel Bergstein. assignor to The Interstate Folding Box Co., Middletown, O. Aug. 16, 1927. (Cl. 206—44).

1.639.282. Box-sealing machine and the like. Samuel Bergstein. assignor to The Interstate Folding Box Co., Middletown, O. Aug. 16, 1927. (Cl. 93—2).

1.639.283. Box-making machine and the like. Samuel Bergstein, assignor to The Interstate Folding Box Co., Middletown, O. Aug. 16, 1927. (Cl. 93—44.)

1.639,613. Digester. Carlton Riddle, assignor to The McNeil Boiler Co., Akron O. Aug. 16, 1927. (Cl. 92—18).

1.639,704. Process of bleaching cellulosic material. George A. Richter and Milton O. Shur, assignors to Brown Co., Berlin, N. H. Aug. 23, 1927. (Cl. 8—2).

1,639,797. Pulp screen. John Arthur Dickinson, East Angus, Que., Canada. Aug. 23, 1927. (Cl. 92—29).

1,639,917. Beater. George Stanford Witham, Jr., Hudson Falls, N. Y. Aug. 23, 1927. (Cl. 92—24).

1,640,007. Papermaking machine. John Moravec, Vancouver, B. C. Canada. Aug. 3, 1927. (Cl. 92—51). (Suction box table and drive roll).

1,640,185. Coating process. Alfred Eggiman and Albino Perea, Paris, France. Aug. 23, 1927. (Cl. 91—68).

1,640,596. Treatment of fabrics, paper and other materials. Robert H. Chatham, assignor to Celanese Corp. of America, Aug. 30, 1927. (Cl. 91—70).

1,640,612. Process for the recovery of pulp from printed waste paper. Ernest Theodore McGregor, Vancouver, B. C., Canada. Aug. 30, 1927. (Cl. 92—3.)

1,640,638. Means and method for making paper boxes and the like. Samuel Bergstein and Arthur C. E. Lindner, assignor to The Interstate Folding Box Co., Middletown, O. Aug. 30, 1927. (Cl. 93—36).

1,640,662. Drying cylinder for paper machines and textile goods drying machines. Ewald Lütschen, Munich, Germany. Aug. 30, 1927. (Cl. 34—4).

1,640,685. Envelope. Silvio M. Aitelli, Newark, N. J. Aug. 30, 1927. (Cl. 72—86).

1,640,736. Plaster board. Joseph Strand, Los Angeles, Cal. Aug. 30, 1927. (Cl. 72—124). Process of producing pulp having a high percentage of resistant cellulose. George A. Richter, assignor to Brown Co. Berlin, N. H. Aug. 30, 1927. (Cl. 92—11).

1.640,906. Process and apparatus for making roofing elements. Thomas Robinson, New York City. Aug. 30, 1927. (Cl. 154—1).

1,641,173. Belt for paper-finishing machines. Frank C. Ladd and Franklin G. Neal, assignors to Eastern Mfg. Co., Boston, Mass. Sept. 6, 1927. (Cl. 101—28).

1,641,423. Paper converting machine. Clifton O. Gammell, Green Bay, Wis. Sept. 6, 1927. (Cl. 270—81).

1,641,478. Process of treating paper. Dozier Finley, assignor to The Paraffine Companies, Inc., San Francisco, Calif. Sept. 6, 1927. (Cl. 92—21)

1,641,479. Method of treating paper board. Dozier Finley, assignor to the Paraffine Companies, Inc., San Francisco, Calif. Sept. 6, 1927 (Cl. 91—68).

1,641,648. Plaster board. Alexander S. Speer, assignor to United States Gypsum Co., Sept. 6, 1927. (Cl. 154—45.9)

1,641,739. Method of and apparatus for creping paper. Austin E. Cofrin, Green Bay, Wis. Sept. 6, 1927. (Cl. 92—69).

1,641,986. Papermaking mechanism. Nickolas J. Niks, Chillicothe, O. Sept. 13, 1927. (Cl. 92—45). (Wire and apron.)

1,641,987. Paper machine and method of making paper. Nickolas J. Niks, Chillicothe, O. Sept. 13, 1927. (Cl. 92—44).

1,642,008. Machine for making a rubberized composition. Paul Beebe, assignor to The Goodyear Tire and Rubber Co., Akron, O. Sept. 13, 1927. (Cl. 92—49).

1,642,053. Truing lathe for wood pulp grinders. John James Warren, Brownville, N. Y. Sept. 13, 1927. (Cl. 125—11).

1,642,055. Process of briquetting fuel. Park E. Kelton and George H. Wadsworth, assignor to The P. E. Welton Engrg. Co., Akron, O. Sept. 13, 1927. (Cl. 44—10). (Use of waste bisulphite liquor).

1,642,159. Stencil sheet. Charles F. Kumli, assignor to Spiegel. May, Stern Co., Chicago, Ill. Sept. 13, 1927. (Cl. 41—38.6).

1,642,327. Removable lining shell for Jordan engines. Archer LeRoy Bolton, assignor to John W. Bolton & Sons Inc., Lawrence, Mass. Sept. 13, 1927. (Cl 92—27).

1,642,495. Process for making paper. John Allen Heany, assignor to World Bestos Corp., Peterson, N. J. Sept. 13, 1927. (Cl. 92—24).

1,642,766. Waterproof abrasive fabric and method of making the same. Frank Joseph Crupi, assignor to Herman Behr & Co., Inc., Bklyn., N. Y. Sept. 20, 1927. (Cl. 51—280)

1,642,782. Machine for making corrugated paper. Samuel M. Langston, Wenonah, N. J. Sept. 20, 1927. (Cl. 154—30).

1,642,840. Plaster board. Sidney C. Clark, assignor to American Gypsum Co., Port Clinton, O. Sept. 20, 1927. (Cl. 154—45.9)

1,642,978. Process for bleaching and like purposes. Carl Busch Thorne, Hawkesbury, Ont. Sept. 20, 1927. (Cl. 8—2).

1,643,019. Stencil sheet. Wm. H. Kurth, assignor to The Heyer Duplicator Co., Inc., Chicago, Ill. Sept. 20, 1927. (Cl. 41—38.6).

1,643,116. Composition for treating products of fiber and method of making same. Charles R. Felix, Hatfield, Pa. Sept. 20, 1927. (Cl. 134—78.6).

1,643,117. Apparatus for applying a lubricant to paper. Charles Gustavson, assignor to Lion Match Co., Inc., N. Y. C. Sept. 20, 1927. (Cl. 91—29).

1,643,147. Crinkling paper. Edward H. Angier, Framingham, Mass. Sept. 20, 1927. (Cl. 92—69).

1,643,355. Process for the manufacture of high-alpha-cellulose fibre. George A. Richter and Milton O. Schur, assignor to Brown Co. Berlin, N. H. Sept. 27, 1927. (Cl. 92—13).

1,643,368. Self-supporting lining for Jordan engine shells. Archer LeRoy Bolton, assignor to John W. Bolton and Sons, Inc. Lawrence, Mass. Sept. 27, 1927. (Cl. 92—27).

1,643,373. Method and mechanism for making tapered shingles. Albert L. Clapp, assignor to The Klintkote Co., Boston, Mass. Sept. 27, 1927. (Cl. 92—41).

1,643,566. Process for bleaching and the like purposes. Carl Busch Thorne, Hawkesbury, Ont. Canada. Sept. 27, 1927. (Cl. 8—2).

1,643,657. Papermaking apparatus. Ralph E. Heisel, assignor to The Mead Pulp & Paper Co., Dayton, O. Sept. 27, 1927. (Cl. 92—44).

1,643,716. Controller. Darcy E. Lewellen and Emmons F. Lewellen, Columbus, Ind. Sept. 27, 1927. (Cl. 92—46).

1.643,801. Method and apparatus for constructing plaster board. Charles R. Birdsey, assignor to U. S. Gypsum Co., Chicago, Ill. Sept. 27, 1927. (Cl. 154—1).

1,643,826. Process for making paper pulp. Bertrand S. Summers, Port Huron, Mich. Sept. 27, 1927. (Cl. 92——).

1,644,050. Process for producing reenforced waterproof composition. Walter H. Cady, Boston, Mass. Oct. 4, 1927. (Cl. 92—40).

1,644,095. Paper Bag or envelope. Wm. Gibson Thomlinson, Glasgow, Scotland. Oct. 4, 1927. (Cl. 229—76).

1.644,148. Apparatus for feeding continuous wood working grinders. Paul Priem, Heidenheim-on-the-Brenz, Germany. Oct. 4, 1927 (Cl.83—75).

1,644,199. Wall board and method of forming the same. Frank J. Moore, North Tonawanda, N. Y. Oct. 4, 1927. (Cl. 20—4).

1,644,226. Portable air jet for paper machines. Frank Bedard, Flint, Mich. Oct. 4, 1927. (Cl. 92—38.)

1,644,411. Paper box and the like. Samuel Bergstein, assignor to The Lnterstate Folding Box Co., Middletown, O. Oct. 4, 1927. (Cl. 229—48).

1,644,447. Treatment of paper pulp. Clarence R. Robinson, assignor to Robinson Fibre Corp. Wilmington, Del. Oct. 4, 1927. (Cl. 92—9).

1,644,451. Paper and process of making same. Harold A. Smith, assignor to The Hamersley Mfg. Co., Garfield N. J. Oct. 4, 1927. (Cl. 91—68).

1,644,620.Apparatus for paper manufacture. Charles Wilbert Unkle, Baltimore, O. Oct. 4, 1927. (Cl. 92—40).

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

By Clarence J. West, Chairman

Paper Specialties

Gummed Paper. W. W. McLaurin. Eng. pat. 262,669. Strip gummed paper is made by applying coating of substantially equal thickness of adhesive and non-adhesive material to adjacent parts of the paper. The apparatus is adjusted so that the coatings are of substantially equal thickness, scrapers or doctors being used on the feed rolls if necessary. The paper is intended to be cut up for labels, posters, etc., which when stacked for printing form a stack which is level at all heights, as each individual sheet is of uniform thickness over its whole surface.—A. P.-C.

Process for Making Carbon Paper. G. W. Poorman assignor to Kee Lox Manufacturing Co. U. S. pat. 1,614,490, Jan. 18, 1927. A tissue is coated on both faces with compositions, only one of which contains coloring material and both coatings (which are applied hot) are simultaneously cooled and set to produce a non-curling carbon sheet.—A. P.-C.

Surface-Sized Paper. H. Scherbak and A. Lutz. Can. pat. 264,999, Oct. 12, 1926. Paper is treated with a solution of glue, the greater portion of the water is evaporated, the paper is treated with formaldehyde and piled moist to cure.—A. P.-C.

Process of Coating Paper with Adhesive. W. W. McLaurin U. S. pat. 1,619,027, Mar. 1, 1927. The surface of the paper is moistened, powdered adhesive which is soluble in the liquid with which the surface is wet is applied thereto, and the paper is then dried.—A. P.-C.

Fireproof Roofing Material. F. S. Vivas. U. S. pat. 1,612,677, Dec. 28, 1926. Fireproof roofing is prepared by sizing a felt body with a solution of gelatin or casein 20 parts, borax 40 parts, potash alum 40 parts, ammonium chloride or other chloride 15 parts, boric acid 20 parts, sodium thiosulphate 15 parts and water 845 parts, followed by drying and saturation with a non-inflammable hydrocarbon material such as a mixture of asphalt and rosin with fireproofing substances.—A. P.-C.

Method of and Apparatus for Drying Sheets of Artificial Heat Insulating Lumber. T. B. Munroe assignor to Dahlberg and Co., Inc., U. S. pat. 1,598,980, Sept. 7, 1926. "Celotex," an artificial insulating lumber prepared from bagasse fibers and wood fibers and made into sheets about 0.5 in. thick, cannot be satisfactorily dried by heating when in contact with air, as it has been observed that under these conditions there is formed a more or less water-resistant layer on the surface, which greatly retards the drying of the inside layers. This trouble is overcome when drying is carried out in presence of steam and out of contact with air. The patent provides a drying casing about 1,000 ft. long in which the sheets are in direct contact with steam at 250 degrees F., to 260 degrees F., and in which there are steam coils which maintain the temperature at about 250 to 350 degrees F., the heat required for evaporating the water from the sheet being supplied from the coils rather than from the steam in direct contact with the sheet. Provision is made to withdraw the steam thus formed and recover the heat.—A. P.-C.

Machine for Impregnating Roofing Material. H. M. Nicholls. U. S. pat. 1,603,976, Oct. 19, 1926. This is an improvement on U. S. pat. 1,400,310, of Dec. 13, 1921. In order to obtain complete impregnation while operating at a high speed, the impregnating tank is provided with more than five submerged rolls or "gates." With a large number of "gates" the sheet generally does not run straight under and over the guiding rolls and breaks quite frequently. The inventor in the present case provides means for automatically raising or lowering slightly one end of the "gates" so as to automatically maintain the sheet in proper alignment and prevent it from breaking.—A. P.-C.

Machine for Coating and Surfacing Prepared Roofing. W. H. Cady, assignor to the Flintkote Co., U. S. pat. 1,599,512, Sept. 14, 1926. Individual roofing strips severed from a web of roofing are delivered on to a conveyor which brings them to a coating roll which applies an asphalt coating and which has lugs adapted to register with notches in the roofing strips. The latter are then carried by the conveyor under a hopper which applies a granular surface material and between press rolls which press the surfacing into the asphalt coating.—A. P.-C.

Roofing. G. P. Heppes assignor to The Flintkote Co. U. S. pat. 1,618,192, Feb. 22, 1927. In order to make rough-surfaced roofing having a plane margin, the sheet is coated with a hot molten impregnating compound, a blast of cold air is directed against the marginal portions to cool and partially set the coating, and granular surfacing is applied while the remainder of the sheet is still sufficiently warm and tacky to cause the surfacing to adhere except along the marginal strips.—A. P.-C.

Paper Films for Photography and Kinematography. V. Bausch, and Schoeller and F. Bausch. Eng. pat. 260,306. A substitute for celluloid as the support of the sensitive layer is produced by impregnating paper with a solution of artificial resin in alcohol, etc. The resin may be produced by distilling a resin acid with an alcohol, e.g., a resin ester; or by condensing tar oils, e.g., coumarone resin; or by condensing phenol with formaldehyde, e.g., the substance known under the registered trade mark "Bakelite." To harden the product, lacquers such as shellac may be added to the impregnating medium or colloids which may be hardened after impregnation by chromium salts or formaldehyde. A satin surface may be produced by treatment in a hot press.—A. P.-C.

Machine for Making Crinkled Paper. H. G. Widmer assignor to Arkell Safety Bag Co. U. S. pat. 1,612,085, Dec. 28, 1926. The machine consists essentially of a supporting roll against which the moistened paper is crinkled by means of a stripping doctor, together with a presser piece for applying pressure to the paper immediately in advance of the doctor to limit the stripping action of the latter.—A. P.-C.

Stencil Sheet. E. W. Hill assignor to A. B. Dick Co., U. S. pat. 1,608,742, and 1,608,743, Nov. 30, 1926. No. 1,608,742. A coating for stencil sheets comprises cellulose nitrate or other suitable cellulose compound occluding or encasing a lubricant, such as a petroleum oil. No. 1,608,743. Specifies a coating including cellulose acetate or other acetone-soluble fatty acid ester of cellulose together with lubricating and tempering substances such as chlorinated napthalene and amyl or buyl tartrate.—A. P.-C.

Stencil Sheet. S. Horii. U. S. pat. 1,608,881, Nov. 30, 1926. A sheet of Japanese yoshino paper or similar material is impregnated with a colloidal composition including Funori, an alkali soap of solid fats and glycerol.—A. P.-C.

Process for Producing a Separable Multiply Waterproof Sheet. L. Kirschbraun. U. S. pat. 1,606,427, Nov. 9, 1926. A Multiply sheet is formed on a cylinder machine in the usual manner, and a low-melting waterproofing material is introduced into some of the inner plies while they are being formed. An independent layer of non-adhesive material is interposed between the

waterproofed inner plies to function as a parting medium.—A. P.-C.

Stencil Sheet. G. Leonard. U. S. pat. 1,607,090, Nov. 16, 1926. A loose-fibered tissue is coated with a cellulose acetate mixture and the coated sheet is subsequently treated with a solution comprising denatured alcohol or butyl alcohol, or other suitable solvent, palm butter and stearic acid.—A. P.-C.

Battery Liner and Process of Manfg. Same. A. W. Schorger assignor to C. F. Burgess Lab., Inc. U. S. pats. 1,608,623 and 1,608,624, Nov. 30, 1926. A liner for dry cells is made from paper pulp containing some gelatinized cellulose, making into a sheet, and shaping the latter into a liner while still wet. No. 1,608,623 covers the product and 1,608,624 the manufacturing process.—A. P.-C.

Stencil Sheet. D. Smith. Eng. pat. 244,543, Sept. 30, 1924. Yoshino paper or the like is coated with a composition comprising an ether of cellulose or of starch or other carbohydrate, a tempering agent such as castor oil, and chlorinated napthalene. A method of preparing an ethyl ether from corn starch is described in the specifications.—A. P.-C.

Stencil Sheet. A. de Waele assignor to D. Gestetner, Ltd. U. S. pats. 1,604,884, and 1,604,885; R. Lant, assignor to D. Gestetner, Ltd., U. S. pats. 1,604,886 and 1,604,887, Oct. 26, 1926. No. 1,604,884—A stencil layer is formed of a disperse system including a gelatinized organic colloid such as gelatin deposited from an aqueous medium, an oily tempering ingredient such as sperm oil and a sulphonated sperm oil or wax. No. 1,604,885 specifies the use of a gelatinized carbohydrate such as sea-weed jelly and an oleaginous tempering agent, e.g., light mineral oil. No. 1,604,886 specifies a gelatinized organic colloid deposited from an aqueous medium together with sufficient oleaginous hydrocarbon material to maintain this composition permanently suitable for stencilizing when free from moisture. No. 1,604,887 specifies a stencil sheet coating comprising a protein material together with a fatty acid ester of high molecular weight and oleaginous character.—A. P.-C.

Rubberlatex Rag Paper. James Scott. Paper Maker and Brit. Paper Tr. J. 73, 289-291 (March 1, 1927). An illustrated description of its microscopical features.—A. P.-C.

Waterproofing Creped Paper. E. H. Angier. U. S. pat. 1,603,932, Oct. 19, 1926. The waterproofing agent is applied to the paper dispersed in an aqueous medium, and the moistened paper is creped and then dried.—A. P.-C.

Waterproofing Paper. H. Quittner. Eng. pat. 283,849. Waterproofing coatings of rubber produced on paper by using rubber, balata or gutta percha latex, are caused to adhere strongly to the material by adding resin in a colloidal state to the latex. The resin may be natural or artificial, and may be emulsified by treatment with alkali. For example, one part by weight of shellac is dissolved by the addition of alkali in six parts of water, and the solution mixed with one to two parts of rubber latex. The resulting emulsion is applied to the paper. The latex and the resin solution may be applied successively or simultaneously. The latex may be employed in the natural state, diluted or concentrated, fresh or in a preserved state, or in a vulcanized condition. Vulcanizing or hardening compounds and accelerators may be added, with or without filling materials, dyes and glue or sizing materials. The coated material may be subsequently vulcanized. Sheets of such material may be superposted to form a compound sheet.—A. P.-C.

Decorated Paper. V. Lefebure. Eng. pat. 265,334. This improved method of decorating paper consists in applying a synthetic resin mixture, containing coloring matter, to the entire surface of the paper, the resin not yet being cured to the irreversible state, and curing the synthetic resin by heat and pressure.—A. P.-C.

Crepe Paper or the Like Material and Method of an Apparatus for Producing Same. W. H Cannard. U. S. pat. 1,595,991, Aug. 17, 1926. Instead of mounting the doctor-blade on fixed supports as usual, it is mounted on an eccentric, the sweep of which is adjustable. Provision is made for changing the speed with which the eccentric is driven and, in addition, for changing the angle at which the blade engages the roll surface. A change is also effected in the speed with which the web is stripped from the roll, in that, when the blade is advancing and the roll is rotating at a given speed against the advancing blade-edge, the web is removed at a greater speed than when the blade is receding. This change of angle and of speed of removal of the web results in the production of a crepe paper with varied sizes of crinkles at regularly-recurring intervals.—A. P.-C.

End Protectors for Paper Rolls. A. Leven assignor to Corrugated Paper Mills. U. S. pat. 1,603,959, Oct. 19, 1926. The protector consists of a disk of corrugated board or paper of such size as to fit the end of the roll. The disk has two or more tabs which are bent over to lie against the side of the roll where they are securely held in position with rope or wire, or by the usual means employed for wrapping the roll.—A. P.-C.

Apparatus and Method for Packaging Paper. W. C. Ludwig assignor to The Mead Pulp & Paper Co. U. S. pat. 1,618,542, Feb. 22, 1927. The paper is packaged and transported in an apparatus consisting of top and bottom compression plates connected by tie rods, the bottom compression plate being constructed so as to constitute a skid for supporting the stack of paper above the ground.—A. P.-C.

Method of Making Bends in Fiber Tubes. C. Q. Ives assignor to Brown Co. U. S. pat. 1,602,579, Oct. 12, 1926. Into the straight moist tube, as it comes from the forming mandrel, there is introduced a wire coil engaging the inner wall of the tube. The coil preferably is normally of slightly larger diameter than the interior of the tube, and is wound to a smaller diameter in which condition it is readily introduced; on releasing it uncoils sufficiently to engage the inside of the tube at a uniform pressure. After the tube has been bent to the required shape and clamped, drying is hastened by passing warm air over and through the tube and at the same time passing an electric current through the wire coil. When the tube is dry the coil is withdrawn and the tube is impregnated with waterproofing material. In order that specially shaped bends may be made on the job, without having to order them specially from the factory, bent impregnated tubes may be cut into small lengths which are provided with mating socket joints at their ends. These joints permit the several sections to be turned relatively to one another to any extent desired so as to permit them to assume at will a great variety of bends of different shapes and degrees of curvature.—A. P.-C.

Machine and Method for Forming Creases in Fiber Board. C. C. Gamm and F. C. Cordes. U. S. pat. 1,611,734, Dec. 21, 1926. The fiber board or corrugated board is fed between a stationary and a movable die which are shaped to press the material therebetween and the movable die is rapidly reciprocated against the material to form a groove therein.

Moistureproof Container. R. S. Fleming assignor to Merrell-Soule Co. U. S. pat. 1,616,849, Feb. 8, 1927. The patent covers a moistureproof article in the form of a bag formed of paper saturated with a composition comprising approximately eight parts of paraffin to 3 parts of petrolatum.—A. P.-C.

Parchment Paper and Vulcanized Fiber. R. Arnot. Eng. pat. 260,374. In the manufacture of parchmentized or vulcanized fiber by hydrolizing cellulose fiber such as paper with zinc chloride or other suitable salt or acid, the last traces of reagent are neutralized, and the corrosive tendency of the product overcome by the use of a medium or media which, while not injuriously affecting the treated cellulose material, will form with the remaining hydrolizing agent an insoluble product, or an addition product, and thus render lengthy washing after parchmentizing unnecessary. These media may be added to the hydrolizing liquid or they may be applied before or after treatment therewith. Where zinc chloride is the hydrolizing agent used, the following media may be employed: a solution of an alkali or of a salt of silicic or phosphoric acid or of sulphuric acid such as naphthalene sulphonic

acid, an oleate, resinate, salt of casein or pyridine, and albuminate, an amine or other organic base, a solution of a salt which will give an insoluble chloride such as lead acetate, or silver nitrate, an oil such as Tung oil used alone or dissolved in acetone or like solvent, such material as also soft soap, rendering the product flexible and waterproof. The use of an alkaline silicate such as sodium silicate yields a fireproof product. When zinc chloride is used, alkaline soap and some oils produce on the surface a coating of a very sticky zinc soap and may be used when it is desired to combine several sheets to form a solid plate or block under heat and pressure. Chinese wood oil produces a rubber-like surface which needs to be treated with an oxidizing agent such as dilute chromic acid or a solution of iron chloride in acetone. R chromic acid or a solution of iron chloride in acetone. Rubber latex or a drying oil such as Tung oil may be applied to the cellulose material before hydrolysis. Dyes may be added to the neutralizing agent or the product may be passed subsequently through a separate dye solution.—A. P.-C.

Waterproofing Vulcanized Fiber. E. E. Novotny and C. J. Romieux, assignors to J. S. Stokes. U. S. pat. 1,616,062, Feb. 1, 1927. Material such as paper or cloth or cellulosic pulp is impregnated with a resinoid phenolic condensation product, or similar substance, and is then treated with a reagent such as zinc chloride to modify the cellulose, and subjected to heat and pressure to produce a material which is hard, tough and resistant to moisture, in laminated sheets and other forms.—A. P.-C.

Moulded Hollow Pulp Bodies. R. Haas. U. S. pat. 1,609,942, Dec. 7, 1926. A suspension of the pulp in water is forced into the mold, which has perforated walls to allow the water to pass through. When the article has been built up to the proper thickness, the supply of pulp is shut off and hot air is forced inside the mold to dry the pulp.—A.P.-C.

Machinery

Bark Press. M. J. Power. U. S. pat. 1,602,626, Oct. 12, 1926. In bark presses in which water is forced out by means of a piston acting in a perforated cylinder, a considerable amount of water remains in the bark near the piston. This is overcome in the invention by making the piston hollow so that the water may pass into it, and means are provided for washing out any bark which might be caught in the slots and block them. When starting up the press, the bark has a tendency to pass freely out through the open end of the cylinder without building up a resistance to the piston; and the same thing may occur if the bark feed decreases. The inventor has therefore provided a pivoted resistor jaw at the open end of the cylinder, which automatically opposes the passage of the bark and offers a resistance which varies inversely with variations occurring in the resistance of the cylinder when the machine is operating at less than full capacity.—A. P.-C.

Machine for Thickening Pulp (Wet Machine) F. P. Klund. U. S. pat. 1,595,894, Aug. 10, 1926. Stock at a relatively high consistency (for instance, as it comes from the deckers) is fed into a hopper which delivers it on to the top of a horizontal rotating screen drum. Near the latter are two horizontal rolls (one of them near the discharge of the hopper and the other at the point where the pulp layer leaves the surface of the drum) about which pass an endless flexible belt which firmly presses the layer of pulp against the surface of the screen drum. The discharge of the hopper is provided with an adjustable gate, by means of which the thickness of the layer of pulp can be varied. On leaving the screen drum, the layer of pulp is passed through press rolls, or otherwise suitably treated.—A. P.-C.

Combined Suction and Pressure Drum for Pulp, Cellulose, and the Like Machines. J. Stephansen. U. S. pat. 1,596,775, Aug. 17, 1926. The surface of the drum or roll is provided with apertures or slots, which are at least 30 times as long as they are broad, and which are arranged sectionally around and in series along the drum. They are of such a depth that they communicate with a collecting channel arranged underneath each section, bored in the drum wall proper, and communicating with a vacuum chamber. Practically the entire portion of the surface of the roll which is not in contact with the web is covered by a stationary adjustable shell, which at that portion prevents air from penetrating into the slots in the roll.—A. P.-C.

Apparatus for Cutting and Removing Lapped Sulphite from the Top Press Roll of Wet Machines. C. M. MacAllister. U. S. pat. 1,608,129, Nov. 23, 1926. Two pointed cutters are provided, one at each end of the top press roll, and when the desired thickness of pulp has been built up on the roll the knives are rapidly moved towards the center of the roll, where they meet, and are then retracted to their original positions. The small length of pulp at the middle of the lap, which is not cut on account of the fact that the cutters cannot actually touch each other, is torn through because the cutters arrest the leading edge of the lap and detach it from the roll surface. During the cutting operation the knives are advanced at practically the same speed as the surface of the roll so that there will be no relative motion between the roll surface and the knives, and the lap is thus cut straight across instead of slantwise.—A. P.-C.

History and Art of Pumping and Jordaning. J. A. Hamm. Paper Mill 50, No. 10, 2, 6, 8, 46, 48 (Mar. 5, 1927). Outline of the development of pump and of jordan design, with a description of the main types of pumps and of jordans made by the Shartle Bros. Mach. Co., and a discussion of their merits.—A. P.-C.

Process of Making Paper. L. Grafflin assignor to The Bauer Bros. Co. U..S. pat. 1,603,534, Oct. 19, 1926. The process consists essentially in saturating the stock with water and passing it continuously through one or more disk refiners in which the pulp is passed between disks provided with suitable knives and rotated in opposite directions. The stock can then be sent directly to the paper machine. The inventor claims that a refiner having 36-inch disks rotating at about 1,200 revolutions per minute and absorbing 100 h.p. can replace 6 beaters and 2 jordans with a total power consumption of 900 h.p., besides giving the advantages inherent to continuous as compared with intermittent operation.—A. P.-C.

Paper Machine Driving Arrangements. Brown Boveri & Co. Eng. pat. 262,123. In sectional paper machine drives in which one of the motors is run at constant speed and controls the speed of the other motors, the couch roll motor is made to act as the leading motor and its speed is maintained constant in known manner by means of a tachometer dynamo controlling a quick-acting regulator.—A. P.-C.

Improved Doctor for Use in Threading Paper Through Paper Machines. R. E. Read assignor to International Paper Co. U. S. pat. 1,605,067, Nov. 2, 1926. The invention consists of a doctor knife of improved form cooperating with the press rolls and calender rolls of the machine to which there is a tendency for the lead strip to adhere when threading the paper through the machine. Air blasts are provided in combination with the doctor knife which will prevent the web from adhering to the doctor blade and will deflect it down on to the lower roll. The doctor is brought into action just while the paper is being threaded, and during the normal operation of the paper machine is removed out of contact with the roll.—A. P.-C.

Innovations in Paper Mill Plant. Wintermeyer. World's Paper Tr. Rev. Pulp and Paper 25, 583-584 (May 5, 1927). Brief description of the Voith pneumatic system of transporting pulp, with a discussion of its merits and of the merits of the Grewin drying system by blowing hot air at the pockets formed by the paper and driers.—A. P.-C.

New Roller Suction Box. Anon. Paper Tr. J. 84, No. 19, 46 (May 12, 1927); Paper Mill 50, No. 20, 6, 8 (May 14, 1927); Paper Ind. 9, 257 (May, 1927). Illustrated description of the new Norwood roller suction box.—A. P.-C.

Breast-Roll Transfer Mechanism for Fourdrinier Paper Machines. E. E. Berry assignor to Beloit Iron Works. U. S. pat. 1,599,402, Sept. 14, 1926. The patent covers various details of construction whereby, when the fourdrinier part of the machine

is to be removed for changing or repairing the wire, the breast roll is transferred to brackets provided for the purpose at the end of the table rails. In order to facilitate the transfer, removable bridge beams are placed between the breast-roll brackets and the brackets at the end of the table rails. On the top of each bridge beam is a row of teeth forming a rack, with which meshes a peripheral gear in each of the breast roll bearings.—A. P.-C.

Wire Cloth for Paper Machines. C. Kurtz-Hahnle and H. Kurtz. Eng. pat. 262,336. In order to avoid jerkiness caused by the seam of the wire jumping over the grooves in the covers of the suction box the seam is arranged at an inclined angle to the wire cloth so that it gradually moves across the suction box, starting at one end and avoiding the sudden jerk to which a seam at right angles is subjected.—A. P.-C.

Paper Machine Wire. A. Elsenhans. Fr. pat. 615,176. In order to reduce the wear the warp is made from alloy steel with high chromium and medium nickel contents.—A. P.-C.

Delivering Stock on to the Paper Machine. C. Bucking. U. S. pat. 1,610,742, Dec. 14, 1926. The stock is delivered on to the apron by admitting from below through a number of small vertical conduits in such a manner as to cause a number of small eddies in the pulp as it reaches the apron.—A. P.-C.

Guard Board for Paper Machine Couch Rolls. H. M. Ashby assignor to F. C. Huyck & Sons. U. S. pat. 1,612,250, Dec. 28, 1926. The device consists of a backboard on which is mounted a thin jacket-engaging blade approximately 0.25 in. thick, and means are provided for automatically maintaining the pressure of the blade against the couch roll jacket as the blade wears away.—A. P.-C.

White Water Shower Nozzle for Paper Machines. M. Dezurik. U. S. pat. 1,617,673, Feb. 15, 1927. The nozzle consists essentially of a hollow cylindrical body with a substantially hemispherical terminal discharge portion provided with a discharge slot extending to the cylindrical body portion and sufficiently wide to prevent clogging by the fibers and other suspended solids in the white water.—A. P.-C.

Paper Drying Process. E. V. Asten U. S. pat. 1,615,210, Jan. 25, 1927. Suction boxes are provided, one for each drier, open at one side and arranged to embrace part ot the circumference of the associated drying rolls, so that the sheet will be subjected to the simultaneous action of the drying cylinders and of the suction boxes.—A. P.-C.

Watermarking Fourdrinier Wire. H. R. Harrigan assignor to American Writing Paper Co. U. S. pat. 1,616,222, Feb. 1, 1927. The watermarking portions are formed by weaving the wire of closer or more open mesh than the main body of the fabric at the desired points, so as to vary the density of the paper to be formed at the watermarking portions sufficiently to watermark the paper without weakening it at these portions.—A. P.-C.

Apparatus and Method for Applying Wires to Removable Fourdriniers. E. E. Berry assignor to Beloit Iron Wks. U. S. pat. 1,613,264, Jan. 4, 1927. A portable carriage is provided adapted to be moved into position and co-act with the removable fourdrinier; and on the portable carriage is a reel carriage which can be advanced along the fourdrinier to place the new wire in its proper position on the fourdrinier.—A. P.-C.

Suction Box Cover. G. C. Compton. U. S. pat. 1,608,202, Nov. 23, 1926. The top of the box is formed of a corrugated metal plate or of a solid plate with ridges and grooves. The ridges of the box top are provided with suction openings which may be elongated and of large area compared to the area of the ridges. The spaces between the ridges are preferably slightly dovetailed, and strips of maple are formed to fit into the grooves or spaces between the ridges and are forced into place and held tightly by the dovetails. Small blocks of maple are inserted at the ends of the grooves formed between the maple pieces. This construction provides a suction chamber clear across the box between each strip, instead of a distributed suction area formed of separated openings as in present forms of suction boxes.—A. P.-C.

Suction Roll for Paper Machines. E. E. Berry. U. S. pat. 1,602,875, Oct. 12, 1926. The patent covers various features in the mechanical construction of the roll designed to avoid the use of driving gears and secure direct driving of the roll as in the case of ordinary plain rolls in paper machines, to permit of the direct drive of the suction roll, and to provide a simple and practical mechanism for the withdrawal and removal of the suction chamber from within the roll or for the removal or replacement of the wire.—A. P.-C.

Fourdrinier Wire and Felt Cleaner. G. Morns and E. E. Berry. U. S. pat. 1,606,172, Nov. 9, 1926. The invention provides for nozzles which are slowly moved back and forth over the lower reach of the wire or felt and discharge water and a suitable cleaning fluid, the distance between the two nozzles being somewhat less than half the width of the sheet. The construction provided for in the patent operates the device by fluid (preferably hydraulic) pressure arranged in such a manner as to automatically reverse the direction of travel of the nozzle carriage when it reaches the edge of the sheet. No gears, chains or other outside moving parts are used.—A. P.-C.

Problem in Head Box Control. Harry Williamson. Paper Ind. 9, 69-70 (April, 1927). A discussion of trouble encountered in an Eastern U. S. paper mill in securing good formation and tests on 130 lb. paper, showing how the head box should be modified in order to eliminate the trouble.—A. P.-C.

Wear of Paper Machine Wire Through Grooving of Suction Box Covers. V. Bouyer. Papier 29, 1091-1096 (Oct. 1926); Paper Ind. 9, 93, 95 (April, 1927). A discussion of the causes of the grooving of suction box covers by paper machine wires, of their effect in accelerating the wear and reducing the life of the wires, and of the methods of reducing or preventing the trouble.—A. P.-C.

Handling Fourdrinier Wires. Allen A. Lowe. Paper Ind. 9, 244-246 (May, 1927). Outline of the care taken by wire manufacturers to deliver the wires to the mills in as nearly perfect condition as possible, and of the care which should be taken in handling them in the paper mill in order to obtain maximum service and prevent premature breakdown.—A. P.-C.

Fourdriniers. Beloit Iron Works. Eng. pat. 265,248. Between the shaking device and the table is provided a paper material holder and feeder which are vertically adjustable to cooperate with the table, to allow disconnection of the table and the shaking means. A further patent (No. 265,524) provides means for removing the fourdrinier wire in a simple manner.—A. P.-C.

Care and Application of Paper Makers Felts. W. J. Starkle. World's Paper Trade Rev. 87, 920-924 (Mar. 25), 1052-1056 (Apr. 1, 1927); Paper Makers Monthly J. 65, 139 (Apr. 14, 1927); Paper Maker and Brit. Paper Tr. J. 83, 391-397 (Apr. 1, 1927); Paper Tr. J. 84, No. 20, 52-53 (May 19, 1927). A description of the manufacture of paper making felts, with a discussion of their application and the care which should be given them to ensure maximum life and service.—A. P.-C.

Cleaning Felts on Paper Machines. F. W. Vickery and L. S. Johnson. Eng. pat. 263,594. In the cleaning of paper machine felts, particularly those of cylinder machines, where the stock is picked up in a very wet condition, the washing of the felt to clear it of short fibers, coloring and loading matter, is effected by a reciprocating nozzle, inclined to the felt and set so that the vena contracta of the jet is at the face of the felt, the latter being maintained under tension as by a plate pressed upwards by springs or by a counterpoised lever, the jet being directed between the plate and the felt. A corrugated roll may be used to give intermittent support to the felt, and a similar roll may be used to make the action of the jet intermittent. The jet may be arranged in rows and so distanced that each jet acts to limit the lateral spread of adjacent jets. Air jets may be used to press the felt against

the plate, and similar jets directed slantwise to the edges of the plate may assist in confining the water laterally. The cleaning action may be supplemented by a steam jet terminating in a narrow slit in the middle of the plate. The jet of water may be confined within a suction box provided with glass rods to make a tight joint with a minimum of friction, other glass rods being provided for the baby presses, primary presses, cylinder molds, breast rolls, and even the squeeze rolls if desired, which completely meets all of the requirements of the applications, and which has been in successful continuous commercial operation for over two years. The advantage of this drive in increasing production through maintaining the proper condition of the felt (which formerly acted as a belt driving the main parts of the machine) are briefly discussed.—A. P.-C.

Paper Machine Press. W. H. Millspaugh assignor to The Paper & Textile Machy. Co. U. S. pat. 1,600,509, Sept. 21, 1926. Improvement on U. S. pat. 1,163,253, of Dec. 7, 1915. A suction press roll is used with a wide suction box, surmounted by two plain press rolls disposed so as to maintain a vacuum action on opposite sides of the bite of each of them with the suction roll. By this construction a single section of press felt equipment is made to perform the function of two such sections. In order to eliminate the watermarking effect corresponding in general to the surface pattern of the perforated cylindrical shell of the suction roll, which is sometimes apparent in paper which passes through a suction press, an auxiliary wire is provided beneath the wet felt, so as to slightly space the felt from the suction roll surface and bridge the perforations of the roll and afford a more uniform and continuous support for the felt.—A. P.-C.

Apparatus for Cleaning the Wet Felts of Paper Machines. to limit the extent to which the felt is drawn downwards. Rows of jets may be arranged in pipes which are reciprocated lengthwise a distance slightly greater than the space between adjacent nozzles.—A. P.-C.

Modern Drive for Board Machines. S. A. Staege. Paper Tr. J. 84, No. 20, 51 (May 19, 1927). The Westinghouse Company has extended the principle of sectional electric paper machine drive to cylinder board machines and has developed a system of drive

E. V. Asten. U. S. pat. 1,610,545, Dec. 14, 1926. The fabric is loosened by passing over a guide member provided with inclined ribs, sprayed with water which readily loosens and removes the dirt on account of the opening action of the ribs of the guide member, passed over a second guide member provided with ribs inclined at the same angle as but in the opposite direction to those of the first member so as to restore the fabric to its original condition, and over a suction box to remove the excess of water. The guiding members may consist of fixed blocks with stationary ribs or of rolls provided with helical ribs. It is claimed that in this way the felt is not injured nor subjected to pressure and that the cleaning is effected quite intensively by the simultaneous distortion and spraying to which it is subjected.—A. P.-C.

Attachment for Improving the Felting of Fibers on Cylinder Paper Machines. E. W. Koeser. U. S. pat. 1,608,698, Nov. 30, 1926. In order to overcome the tendency of the fibers on ordinary cylinder machines to assume a position lengthwise of the sheet, air is blown on the pulp as it emerges from the vat. A large number of narrow nozzles in close proximity to the sheet are provided for the purpose, and they are placed so as to discharge the air obliquely against the pulp and in a direction practically at right angles to the line of travel of the latter. The effect of the air is to cause the fibers in the web near the upper surface thereof to be deflected and turned crosswise or diagonally of the web, while the fibers on the underside of the web are not affected. The depth to which the effect of the air is felt can be regulated by suitably adjusting the air pressure.—A. P.-C.

Paper Drying System. J. T. Murphy. U. S. pat. 1,602,545, Oct. 12, 1926. The patent provides for a continuous passage of steam through the drying rolls, so that the rate of drying is not dependent upon the ability of the paper to absorb the heat from the rolls, but rather upon the temperature of the steam supplied to the rolls. The steam which is discharged from the high pressure driers is used to heat up the water supplied to the beaters; while the steam and water discharged from the low pressure driers is used for boiler feed.—A. P.-C.

Process of and Means for Drying Paper. D. L. McCorkindale. U. S. pat. 1,606,310, Nov. 9, 1926. After tub sizing, the paper is dried by passing around a number of steam-heated drying rolls provided with both top and bottom drying felts, so that the paper itself does not come into contact with any of the rolls. After leaving these rolls the paper passes around heated "conditioning" driers, with which it is in actual contact, then between cooling blasts, and finally it is slit and either reeled or cut into sheets. In some cases the action of either the conditioning driers or the air blasts, or both can be dispensed with.—A. P.-C.

Paper Machine Drier. W. H. Millspaugh assignor to The Paper & Textile Machy. Co. Reissue 16,501, Dec. 7, 1926, of U. S. pat. 1,533,130, of Apr. 14, 1925. The driers are mounted on antifriction bearings and are not provided with driving gears, being driven merely by the felt.—A. P.-C.

Paper Reeling. E. E. Sheldon. Eng. pat. 261,853. The reel bar of this improved machine has a fixed collar at one end and a nut at the other. An expansible ring at each end serves as a bearing between the fixed collar and a slidable collar on the one hand and between the nut and a slidable collar on the other. By turning the nut the expansible ring is stretched or contracted sufficiently to allow the slidable collars to grip the paper being wound.—A. P.-C.

Save All. S. Mitchell. U. S. pat. 1,603,625, Oct. 19, 1926. The save-all consists essentially of a very large tank, say 5 to 6 feet deep, 8 or more feet wide, and 100 to 150 feet long. At one end is an intake chamber separated from the main body of the tank by a series of transversely disposed, vertically staggered baffles over and under which the white water flows into the main tank. To prevent undue agitation as the stock enters the main tank, a catch basin is provided into which the water first flows and from which it quietly overflows; and a similar basin is provided at the outlet end of the tank, from which the clarified water is withdrawn. Some distance from the inlet there is provided a deflecting baffle extending diagonally across the tank with its lower edge slightly submerged, to catch and deflect grease, scum or other floating impurities into a discharge vent or opening in the side of the tank. A pulp conveyor or scraper slowly moves along the bottom of the tank and scrapes the settled solids into a pulp-collecting sump, whence they are withdrawn and pumped to the beaters, etc.—A. P.-C.

Save All. H. B. Wadsworth. U. S. pat. 1,604,250, Oct. 26, 1926. The white water is delivered into a tank containing a screen. The tank is preferably of such size as to permit the settling out of some of the fibers. The screen, which is in the upper portion of the tank and which is immersed in the white water, permits the passage of the supernatant water, which is then sent either to the paper machine showers or used elsewhere as required. The deposited and screened out fibers which remain in the tank, together with some of the water, which constitute what may be termed thickened white water, is mixed with the stock, either in the beaters or elsewhere.—A. P.-C.

Slitting Paper Webs. E. C. R. Marks. Eng. pat. 261,690. Two groups of slitting discs cooperate with the backing roll and are mounted on two members which can be rotated simultaneously by a screw gear to throw either of the groups of slitters into action while the other group is being adjusted. The brackets may be carried by a single rotary support adjusted by screw gear. A rotary transverse cutter may be used in conjunction with the slitting mechanism. In a modification the brackets are carried on a single rotary support adjusted by screw gear about a shaft which is adjustable both to and from the back roll and axially.—A. P.-C.

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Edited by

THOS. J. BURKE, C. A., Sec.-Treas.

Supreme Court Upholds Disclosure of Comparative Data

Holds Commissioner's Determination of Special Assessment Subject to Review

Oesterlein Machine Company Case Affirmed

On November 21, 1927, the Supreme Court rendered its decision in the much discussed case of *Blair v. Oesterlein Machine Company*. It will be recalled that this case involves the determination of excess profits tax by the so-called "special Assessment," under the Act of 1918, by comparison with representative corporations similarly circumstanced in certain respects, where the invested capital of the taxpayer cannot be determined or is affected by certain abnormal conditions. On the three questions involved in this case, the Supreme Court held: First, that a determination by the Commissioner under Sections 327 and 328 is subject to judicial review, including a determination that those sections are not applicable, as well as a determination of the amount of relief to be allowed by the application of those sections and the selection of the appropriate comparatives. Second, that the Commissioner may be required by subpoena to disclose information concerning corporations similar to the taxpayer when relevant to the determination of the right of the taxpayer to relief or of the amount of relief under these sections, notwithstanding the statutory prohibitions against publication of such information. Third, as to the jurisdiction of the Board under the 1924 Act over an appeal relating to a year, for which an overassessment was determined (a question which does not arise under the 1926 Act), no decision was rendered but it was held that this question was not raised before the Supreme Court.

Commissioner Given No Unreviewable Discretion

The Supreme Court sustains the position of the Board of Tax Appeals and of the two lower courts to which the case was first presented, in denying the contention of the Commissioner that Section 327 and 328 were intended to confer upon him an unreviewable discretion to make a conclusive determination as to the relief allowable under those sections. No distinction is made between the determination of the Commissioner for the year 1919, that these sections were not applicable to this taxpayer, and his determination for the year 1918, that relief was allowable under these sections in an amount alleged by the taxpayer to be inadequate. It thus appears that determinations of both kinds are held by the Supreme Court to be subject to review. While the discussion of the Supreme Court is limited to review by the Board of Tax Appeals, such review is classified as judicial review. The argument would therefore, appear to be fully appreciable to review by a court. The Supreme Court decision therefore seems to overrule the decision of the Court of Claims in *Williamsport Wire Rope Company v. United States*, holding that the court had no authority to compute a tax under these sections where the Commissioner had held them applicable. A similar decision of a District Court with respect to the analagous but not identical Section 210 of the Act of 1917, in *Feilbach Company v. Niles*, also seems to be in conflict with the conclusions of the Supreme Court. On this issue, the language of the opinion of the Supreme Court in the Oesterlein case is as follows:

> "But there is no inherent impossibility or, indeed, serious difficulty in reviewing judicially any determination authorized by Secs. 327 and 328. The determination is to be made upon prescribed and ascertainable data and is to conform to standards set up by the statute, all defined with sufficient definiteness and clarity to be susceptible of judicial scrutiny. We cannot assume that it is to be either arbitrary or unrelated to the appropriate data in the Commissioner's office, or that he is more qualified to make it than the Board established to review his decisions. An examination of the sections creating the Board and investing it with power can leave no doubt that they were intended to confer upon it appellate powers which are judicial in character. Not only is it required by Sec. 900 (e) to hear and determine appeals taken under Sec. 274, which in terms allows an appeal in every case where a deficiency is found by the Commissioner, but it is empowered to administer oaths and to compel the attendance of witnesses and the production of documents and records. It may investigate anew the issues between the government and the taxpayer and upon the determination of the appeal it may affirm, set aside or modify the findings and decision of the Commissioner. In the light of such provisions there is plainly no sufficient ground for reading into Sec. 274, allowing an appeal wherever a deficiency is found by the Commissioner, an exception based on the supposedly sacrosanct character of his determinations under Secs. 327 and 328."

Disclosure of Facts Concerning Other Corporations Held Permissible

In disposing of the Commissioner's objection that the information concerning other corporations, required for the determination of tax comparison, was confidential and privileged against disclosure, the Supreme Court said:

"But little weight can be given to the suggestion that the Board's appellate powers are limited by the section of the Act prohibiting the publication by collectors of information gained in the course of their duties. Sec. 1018, reenacting Sec. 3167 of the Revised Statutes (U. S. C., Title 18, Sec. 216). The prohibition is limited to disclosures made "in any other manner than may be provided by law.' It cannot be deemed to forbid disclosures made in obedience to process lawfully issued in a judicial or quasi-judicial proceeding, as has, indeed, been recognized by the Treasury Department itself in Treasury Decision No. 2962, directing that copies of returns may be furnished for the government's use as evidence in court. Neither the statute nor the practice of the Department suggests the existence of any governmental policy with respect to the use of the returns as evidence in any way inconsistent with the provisions of the statute authorizing the Board of Tax Appeals to hear appeals and conduct proceedings which are judicial in character."

Decision of Great Value in Pending and Closed Cases

Literally hundreds of cases are now pending before the Board of Tax Appeals where it is alleged that the Commissioner has erroneously refused to allow relief under these sections, or has erroneously allowed an inadequate relief. In both classes of these cases, the decision of the Supreme Court will be of great value to taxpayers. Where the right to relief rests upon abnormal conditions, one element of the case of the taxpayer is the "exceptional hardship evidenced by gross disproportion between the tax computed without the benefit of this Section" and the tax thus computed, which must be shown to result from the abnormal conditions before the right to relief can be established. Heretofore the taxpayer has usually been compelled to rest upon merely a showing of the abnormal conditions, being frequently unable to obtain any competent evidence of the tax determinable under these sections, if applicable, and the consequent hardship, if any. The taxpayer is now in a position to obtain by subpoena uncontrovertible evidence of the tax paid by such specific corporations as he may allege to be comparative, and also such other corporations as the Commissioner may have regarded as comparative in denying the existence of any hardship. In cases where the relief allowed is considered inadequate, the same evidence may now be obtained to establish the taxes paid by other concerns. Even where cases have been closed in the Income Tax Unit and cannot be taken before the Board, there will be a great number of instances in which the taxpayer feels that the action of the Commissioner has not been based upon proper comparisons and in which a court action for a refund may be available to have the Commissioner's determination reviewed and to obtain definite information as to the basis of his determination. It is however, possible, that other questions may be raised which will lead to a distinction between an action for refund and an appeal from the Board and which may result in some restriction of the scope of review in such an action.

Form of Subpoena Sustained in Oesterlein Case

Taxpayers who seek to obtain in other cases the benefits of the remedy sustained by the Supreme Court, will be interested in the exact form and contents of the subpoena issued by the Board and sustained by the courts. The Supreme Court, however, expressly refrained from passing upon the extent to which the information called for was relevant and admissible since that issue had not been raised. The court proceedings were initiated by an application for a mandamus, commanding the Commissioner to obey the subpoena issued by the Board. The application for the subpoena stated that the taxpayer was entitled to have its excess profits tax liability for the years 1918 and 1919 computed under the provisions of Sections 327 and 328 of the Revenue Act of 1918 and in order to sustain the burden of proving the amount of its correct tax liability the taxpayer must show the rate of excess profits tax for the years 1918 and 1919 of representative corporations engaged in a trade or business similar to that of this taxpayer; that the taxpayer had been diligent in seeking the proof of these material facts from other sources and had only such knowledge of such facts sought to be proved and such information as is contained in certain letters and exparte affidavits received from other taxpayers engaged in the business of manufacturing and selling tools; that all the facts sought to be proved by means of answers to the interrogatories attached to the application are within the official knowledge of the Commissioner.

Interrogatories To Be Answered

The interrogatories to be answered in writing under oath by the Commissioner were as follows:—

"(1) Please state whether or not the application of Oesterlein Machine Company for special assessment for the years 1918 and 1919 has been considered by the Commissioner to the extent of comparing the taxpayer with other corporations. (2) Please state whether or not a 'data sheet' was prepared in this case covering the years 1918 and 1919, and, if so, how many 'data sheets' were prepared for each year. (3) If one or more of such 'data sheets' have been prepared for either 1918 or 1919, please submit as the answer to this interrogatory true copies of such 'data sheets'. (4) Please state the names and addresses of each of the corporations whose 'data' are shown on the 'data sheets' referred to in the foregoing interrogatories and state the nature of the business in which each was engaged in the years 1918 and 1919, as shown by the records in the Commissioner's office. (5) As the answer to this interrogatory, please submit a true copy of each of the cards, 'card records,' or similar records, if any showing the 1918 and 1919 'data' of each of the following corporations: (Names of 12 corporations). (6) If there are no cards, 'card records,' or similar records, for any one or more of the corporations listed in the preceding interrogatory, please give the following information as shown by records in the Commissioner's office separately for the years 1918 and 1919 for each such corporation, such information to be taken from the last return filed by each corporation for the years 1918 and 1919, unless the figures in such last return have been adjusted or revised by the Commissioner, in which event give the adjusted or revised figures, and where the information is not so shown the same to be taken from any other records in the Commissioner's office upon which the information may appear.

Schedule

A—Name and address of the corporation.
B—Date of organization.
C—Invested Capital.
D—Statutory intangibles.
E—Adjustments for inadmissibles.
F—Interest-bearing indebtedness.
G—Non-interest-bearing indebtedness to stockholders
H—Gross sales.
I—Other income.
J—Ordinary and necessary expenses.
K—Compensation of officers.
L—Repairs.
M—Interest.
N—Taxes.
O—Bad Debts.
P—Exhaustion, wear and tear (including obsolescence).
Q—Amortization of war facilities.
R—Depletion.
S—Net Income.
T—Net Income
U—Net Income previous year.
W—Average invested capital pre-war period.

From *Commerce Clearing House Bulletin*

New Tax Bill

Changes Made By House Committee

Simplification Deferred

Action taken by the Ways and Means Committee in the matter of revision of the income tax law indicates that the more difficult phases of simplification will be deferred for at least another two years. The following is a summary of the unofficial day by day reports of the action taken by the committee, the draft of the bill not having as yet been made public. The Committee adopted as the basis of its changes in the arrangement of income tax titles, the recommendations made in Volume II of the report of the Joint Congressional Committee on Internal Revenue Taxation, which provide for a less complex and more orderly presentation of the tax law requirements.

Earned Income Provisions Unchanged

The earned income credit provision of Section 209 of the Revenue Act of 1926 was the first one up for consideration. After the receipt of estimates as to the loss which might result from the recommendations of the Joint Committee, it was voted to leave this section of the statute unchanged. It appears to be the prevailing opinion of the Ways and Means Committee that as this section of the law is better understood by the taxpayer, the difficulties which have been found in its administration will be eliminated.

Capital Gain Provisions Not Changed

The Joint Committee's recommendation that no change be made in the method of taxing capital gains and the corresponding treatment of capital losses was approved.

Evasion of Surtax—Sec. 220

With reference to Section 220, the Joint Committee made the following recommendations: Allow the corporation a deduction in computing net income equal to, say, 20 per cent of the excess of dividends paid over dividends received, the deduction in no case to be more than, say, 25 per cent of the corporation's taxable net income before such deduction. In the computation no account should be taken of stock dividends.

The Ways and Means Committee voted, however, to retain Section 220, but added a new classification for personal holding corporations and made provision for special treatment for this class. Chairman Green's oral explanation of the new proposed feature, made to the *United States Daily*, follows:

"Personal holding corporations are to be subjected to a tax of 25 per cent on their net income if they retain 30 per cent or more of their net income for the taxable year. Deductions would be authorized for dividends actually declared during the year and for Federal income taxes. In arriving at the amount of the tax to be levied no account is to be taken of stock dividends.

For the purposes of the new provision a personal holding corporation would be defined as: Any corporation in which 80 per cent or more of the voting stock, exclusive of stock of limited earning capacity and exclusive of stock redeemable on less than 30 days' notice is owned directly or indirectly by 10 individuals or fewer; and any corporation which derives 80 per cent or more of its gross income from rents, royalties, interest, dividends, or sale of securities (except in the case of a dealer in securities). Also any corporation in which the right to receive dividends is vested in 10 persons or fewer, and in which 80 per cent or more of its income is derived from the sources mentioned.

Hearings Before Board

Under another agreement as to proposed features of the tax bill a taxpayer who has a hearing before a division of the Board of Tax Appeals is precluded from demanding a second hearing before the entire board. Another provision in effect states that the board may decide cases on the record presented to it without being required to go outside the record to conduct investigations of its own.

Consolidated Returns

Favorable action was taken on the Joint Committee's recommendations with reference to Consolidated Returns, which are that:

"The statute should be so framed as to treat affiliated corporations the same as separate corporations, except as to the right to offset the operating loss of one corporation against the gain of the other in the same taxable year. Class B affiliations (the class in which 95 per cent of the stock of two or more corporations is owned by the same interests) should be abolished."

Some slight modification of the above recommendations are announced as probable before incorporation in the tax bill, to conform with a suggestion made by the Treasury Department.

Final Determination by Agreement

Section 1106 (b), governing closing agreements, will be modified, according to announced agreement by the Committee, so as to permit the execution of agreements thereunder as soon as the settlements in a given case have been reached between the Government and the taxpayer, without waiting for the assessment and collection of the amount of tax due (if any), the actual making of an abatement, refund, or credit, or the determination in detail of interest or penalties. Provision would be made also that agreements under Section 1106 (b) shall not be restricted to years for which original or additional taxes are determined to be due or unpaid. These changes were recommended by the Joint Congressional Committee.

Changes in the Rate Structure

The Ways and Means Committee bill will provide for tax rate changes resulting in a reduction of revenue estimated at from $235,000,000 to $249,000,000. Besides cutting the corporation tax from 13½ to 11½ per cent and raising the exemption for corporations having a net income of $25,000 or less from $2,000 to $3,000, the Committee raised the exemption on admission taxes to $1.00, reduced the automobile sales tax from 3 to 1½ per cent and made other changes as follows: Club dues reduced by one-half; Transfer tax on shares of capital stock reduced from 2 cents to one cent; Stamp tax on exchange sales and produce was repealed; Tax on cereal beverages repealed; Tax on wines used in making patent medicines and for fortifying purposes reduced to correspond with alcohol to the pre-war figures; placed a 25 per cent tax on all boxing match admissions that are $5 and over in price.

Estate Tax Modification Rejected

By the vote of 17 to 6 the Committee disapproved repeal of the Federal estate tax, and voting 21 to 2 declined to urge reduction in the middle brackets of the surtaxes on personal incomes.

Corporation Tax Reduction

The Committee compromised on the corporation tax between the 12 per cent suggested by Mr. Mellon and 11 per cent proposed by the Democrats under the leadership of Rep. Garner.

Willapa Pulp Co. Makes Plans

PORTLAND, Ore., December 16, 1927.—The Willapa Pulp and Paper Company is going ahead with plans for its plant at Raymond, Wash., which is being made from the remodeled Columbia Box plant. According to R. A. Swain, president of the company, engineers will soon be on the ground to determine foundation requirements. Chief engineer L. A. DeGuere is busy on designs and specifications.

Self-Regulation By Business*

By Hon. Edwin E. Parker, Chairman of Board, U. S. Chamber of Commerce

There was a time when men took what they wanted—if they had the strength. When those equally endowed in strength had designs upon each other's chattels, they bargained for an exchange, and craft and the tactics of barter were substituted for force.

Contrast this condition with the business of today, when confidence, not craft, rules the market-place.

As suggestive of the far distance business has come is its recent designation as "the oldest of the arts and the newest of the professions."

Among the hall-marks of a profession are intelligent preparation through education and training for the work undertaken; a growing group consciousness; the formulation of standards of group conduct, and service to the public. The logic of events has taught business men the value of group action, and enlightened self-interest is slowly but surely bringing those groups and each of their individual members to a realization of group responsibilities.

High Standards Set Up

This is exemplified in the widespread movement to set up in each business, trade, or industry, sound and high standards of business conduct, and to outlaw practices that, in the days of isolation, tended to bring the whole institution of business into popular disrepute. In those days one trickster forced his competitor to use similar tricks in self-defense; but in this day of group action the views of the group in support of fair practices and proper relations between buyer and seller prescribes such tactics through the sanction of collective action.

And the old maxim, "Let the buyer beware," has given place to the economic principle of modern business, "Let the vendor beware lest he offend the canons of fair dealing that self-regulated business has set up."

The constantly increasing complexities of business, interknit with and inseparable from the development of our civilization require that, in the general welfare, business be regulated. That regulation must come either from within or without—from government or from business itself. The growth and development of business and the progress and well-being of society as a whole demand unhampered opportunities for individual effort and initiative, which are rendered increasingly difficult in proportion to the increase in goverment regulation of business.

On the other hand, methods and practices to secure immediate gains without reference to the effect on the general public, or the ultimate effect on business itself, sometimes render imperative restrictive and regulatory legislation in the public interest.

Business resents such legislation! The remedy lies in its own hands. It can if it will, in effect, legislate in its own interest and in the interest of the general public, by establishing its own rules—by creating its own law merchant. Such rules business men themselves must formulate out of their intimate knowledge and experience of conditions and practices obtaining in their particular trade. Self-preservation demands the adoption of this remedy. Self-regulation alone will preserve individual initiative—the master builder of American Business! . . .

Business Desires Self-Regulation

I am convinced that the great majority of sound and far-seeing business men mean what they say when they crave the privilege of self-regulation in their own and the public interest. I am convinced that they realize that because of the complexities of modern business such regulation is impossible save through group action. I am convinced that in the public interest it is inexpedient and unsafe to permit such group action, save under the supervision of a government agency. But business men and business groups move slowly, even where such groups take the form of well-organized trade associations.

If the members of a trade fail to discharge the duties which they owe to themselves and to their industry, they can scarcely be heard to complain should government agencies step in and provide the necessary regulation in the public interest.

But the members of other trades—business as a whole—can and will be heard to complain not of regulation by the government but of the shortcomings of the members of the trade which may render such regulation necessary. For I am convinced that the enlightened self-interest of business as a whole is insistent that those practices which impair confidence in the integrity of its members, which taint with unfairness their relations not only with consuming public but with one another, or which result in waste or extravagance, should be abandoned and outlawed!

* Extract from address before National Council of U. S. Chamber of Commerce, West Baden, Ind., Oct. 17, 1927.

Repainting of Building as Repairs

May the repainting a brick building and replacing worn out parts on elevators be charged as repairs?

Article 104 of Regulations 69 distinguishes between items called repairs which are deductible as current business expense, and capital expenditures which are recovered by depreciation as follows:

"The cost of incidental repairs which neither materially add to the value of the property nor appreciably prolong its life but keep it in an ordinary efficient operating condition may be deducted as expense, provided the plant or property account is not increased by the amount of such expenditure. Repairs in the nature of replacements, to the extent that they arrest deterioration and appreciably prolong the life of the property, should be charged against the depreciation reserve if such account is kept."

The test to be applied in these cases is whether there is an *addition* to value of capital which is not deductible or a *maintenance* of value of capital, which is an expense. Where the property replaced has only a short life and where its value disappears so quickly with use that a depreciation charge is not practical, the cost of such replacement or repair should be charged off as an expense. See Income Tax Guide, (342, C. C. H., Unabridged Vol. II.)

In general, the cost of a replacement is not an expense where the property will continue in use after the expiration of the taxable year.

Each case, however, is largely determined on its own peculiar facts, consideration being given to the kind, extent and probable life of the replacement or repair.—*Commerce Clearing House Bulletin.*

Ground Wood Exports Increase from Norway

WASHINGTON, D. C., December 14, 1927.—Exports of mechanical ground wood from Norway during the first nine months of the current year have not been able to maintain the level of the preceding year, shipments during this period totaling only 375,595 metric tons as against 400,349 tons during the first nine months of last year. Exports of chemical pulp and papers, on the other hand, increased, the former by 6 per cent and the latter of 15 per cent. The gain in paper shipments, however, was largely due to the increased shipments of news print, which show a rise from 102,857 tons to 127,080 tons. The remaining shipments, consisting largely of wrapping and M. G. cap papers show little change from last year.

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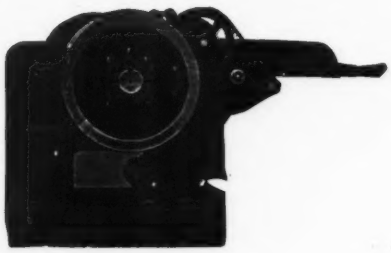

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Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 21, 1927.—The Government Printing Office will receive bids on December 23 for 33,500 pounds (500,000 sheets) of various sizes white sulphite writing paper.

PAPER BIDS RECEIVED

The Printing Office has received the following bids for 40,000 pounds of various size No. 2 quality binders board: Whitaker Paper Company, at $70.00 per ton; Mathers-Lamm Paper Company, $61.00; Dobler & Mudge, $62.00 less 1%; Davey Company, $70.00; and Westport Paper Company, $60.50.

The following bids were also received for 33,500 pounds of various sizes white sulphite writing paper: Barton, Duer & Koch Paper Company, at 6.7 cents per pound; American Writing Paper Company, 7.75 cents; Old Dominion Paper Company, 7.29 cents and 7.69 cents; Reese & Reese, 7 cents and 7.5 cents; J. H. Weil & Co., 9.85 cents; and Stanford Paper Company, 6.995 and 7.15 cents.

Also the Printing Office received the following bids for 4,500 pounds of 21 x 32—129½, No. 72 buff ledger paper: R. P. Andrews Paper Company, 20.9 cents per pound; Barton, Duer & Koch Paper Company, 18.74 cents; Dobler & Mudge, 21 cents; Reese & Reese, 20.87 cents; Walker Goulard Plehn Company, 22 cents; Old Dominion Paper Company, 20.99 cents; and Stanford Paper Company, 23 cents and 33 cents.

PAPER AWARDS MADE

Dobler & Mudge has been awarded the contract for furnishing the Government Printing Office with 40,000 pounds (16,000 sheets) of No. 2 quality, 25 x 30 binders board at $62.00 per ton and the same firm will furnish 7,500 pounds (2,100 sheets) of 22 x 28 best quality same at $93.00 per ton. Bids for these items were received on November 28.

The Whitaker Paper Company has been awarded the contract for furnishing the Government Printing Office with 530 pounds (1500 sheets) of No. 1, 26 x 34 white rope drumhead paper at 20.91 cents per pound, bids for which were received on November 21.

The Government Printing Office has just announced a number of paper awards as follows:

The R. P. Andrews Paper Company will furnish 7,100 pounds (75,000 sheets) of 26 x 34—100 per cent rag white bond paper at 31.5 cents per pound, bids for which were received on November 30.

Dobler & Mudge will furnish 40,000 pounds (26,000 sheets) of various sizes No. 2 quality binders board at $60.00 per ton, bids for which were received on November 25.

The Port Huron Sulphite and Paper Company will furnish 33,210 pounds (110,000 sheets) of various sizes H.F. sulphite manila tag board at 6.96 cents per pound, bids for which were received on November 23.

The Aetna Paper Company will furnish 7,340 pounds (45,000 sheets) of various sizes white sulphite ledger paper at 8.65 cents per pound, bids for which were received on November 28.

The Nashua Gummed and Coated Paper Company will furnish 230 pounds (2400 sheets) of 21 x 24 sensitized paper at $72.00, bids for which were received on November 21.

Walker Goulard, Plehn Company will furnish 40,000 pounds of white sulphite writing paper in 30 inch rolls at 6.29 cents per pound, bids for which were received on November 14.

Colorado Pulp & Paper Contracts Cancelled

DENVER, Col., December 16, 1927.—Contracts under which Joseph Buchhalter, president of the Home Public Market, is alleged to have run the Colorado Pulp and Paper Company into the ground while trying to squeeze out Charles B. Myers, were canceled and set aside by District Judge Samuel W. Johnson in the final decree entered in the district court at Brighton, Monday.

Judge Johnson previously had found that Buchhalter must make restitution to the company in the sum of $17,512.22. The final decree also provides:

"1. That the written contract dated June 1, 1925, between the plaintiff, Charles B. Myers, and the defendant, Joseph Buchhalter, be and the same is hereby declared void and is set aside and held for naught.

"2. That the voting trust set forth and described in the plaintiff's complaint be and the same is hereby declared null and void and of no effect, and the same is canceled and held for naught.

"3. That the issue of 2,500 shares of preferred stock in the Colorado Pulp and Paper Company issued to Joseph Buchhalter be canceled and set aside and be restored to the company and considered as not having been issued, and that Joseph Buchhalter surrender to the receiver any and all certificates issued for said 2,500 shares."

The decree provides that Buchhalter, upon return of the stock, shall be given credit on the judgment of $17,512.22 rendered against him. It orders Buchhalter to pay all the costs of the litigation. The court retains jurisdiction over the company and continues the receivership instituted last spring. A motion for new trial is dispensed with, and the defendants are given time to perfect an appeal to the supreme court.

Myers charged Buchhalter with conspiracy to squeeze him out of the Colorado Pulp & Paper Company. He alleged Buchhalter's plan was to wreck the company and then get possession of it at a fraction of its real worth.

The testimony showed that Myers had put into the company $38,000 of creditors' claims and that Buchhalter had invested $1, using company securities to accomplish the balance of the financing. Under the original promotion contract between Myers and Buchhalter, the former was to have control of the company and they were to buy the paper mill for $300,000. The price paid was $370,000.

Buchhalter threatened to drop the deal unless Myers agreed to give him a larger share of stock, the testimony showed, so the contract of June 1, 1925, was signed. It is this contract which has been canceled. Under the voting trust, Myers, Buchhalter and Harry Davis—one of Buchhalter's attorneys—were named trustees. Myers claimed this trust was used to give Buchhalter complete control of the company instead of for the purpose of operating the concern in the best possible manner.

The effect of the cancellation of the contract and the voting trust is to leave Myers in stock control of the company.

Myers was represented throughout the litigation by Attorney Ernest Morris.

Boston Paper Market Quiet

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., December 17, 1927.—The situation in the paper market is practically unchanged. Conditions generally are firm, but the trade is quiet, marking time at the end of the year. Box board is comparatively inactive the fortnight before Christmas and according to an opinion expressed in the trade it became "quieter this year than it ought to." Some mills have been shutting down until after the turn of the year, but the market is stable and probably will remain so for some time. Prices of all paper are unaltered.

There is little activity in paper stock, with a tendency for mills to stay out of the market. One of the manufacturers using shavings and book stock says that prices are so high that his plant is forced to turn to other commodities, such as pulp. Mills are using largely their own waste paper. To offset high prices they are also buying waste of their customers. Packers are competing keenly to buy waste but it is stated in the trade that ideas of value will have to be revised in order to sell waste to consumers. Rags remain quiet. Prices of both paper stock and rags are unchanged.

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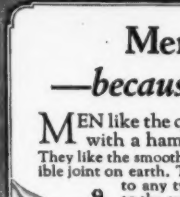

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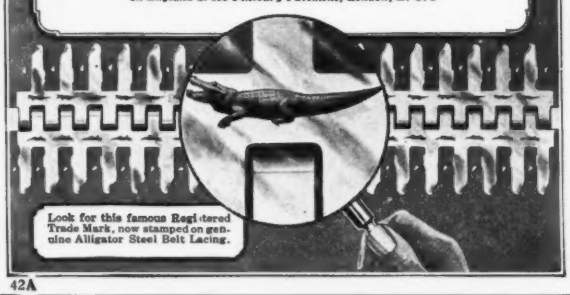

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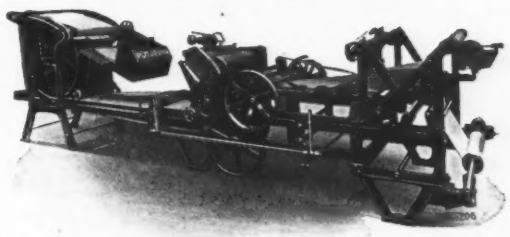

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NEW YORK IMPORTS

WEEK ENDING DECEMBER 17, 1927

SUMMARY

Cigarette paper .....554 cs.
Wall paper .....292 bls., 26 cs.
Paper hangings .....66 bls., 6 cs.
Painted paper .....17 cs.
News print .....3,814 rolls
Printing paper .....69 rolls, 60 cs.
Tracing paper .....3 cs.
Wrapping paper .....26 bls., 31 cs.
Packing paper .....12 bls., 10 cs.
Pergamyn paper .....18 cs.
Stencil paper .....42 cs.
Parchment paper .....28 cs.
Surface coated paper .....212 cs.
Coated paper .....21 cs.
Basic paper .....30 cs.
Baryta coated paper .....192 cs.
Tinfoil paper .....5 cs.
Decalcomania paper .....45 cs.
Cover paper .....8 cs.
Colored paper .....91 cs.
Filter paper .....12 bls., 63 cs.
Drawing paper .....55 cs.
Writing paper .....2 bls., 1 cs.
Tissue paper .....58 cs.
Litho paper .....25 cs.
Blotting paper .....3 cs.
Straw board .....879 rolls
Miscellaneous paper .....327 rolls, 193 cs.

CIGARETTE PAPER

Standard Products Corp., Waukegan, Havre, 40 cs.
De Manduit Paper Corp., Waukegan, Havre, 300 cs.
Liggett & Myers Tobacco Co., Roussillon, Bordeaux, 19 cs.
Gluckman & Strauch, Roussillon, Bordeaux, 5 cs.
F. C. Strype, Roussillon, Bordeaux, 2 cs.
Standard Products Corp., De Grasse, Havre, 106 cs.
P. Lorillard & Co., Cedric, Liverpool, 42 cs.
Standard Products Corp., Paris, Havre, 40 cs.

WALL PAPER

F. J. Emmerich, A. Ballin, Hamburg, 1 cs., 44 bls.
Bendix Paper Co., A. Ballin, Hamburg, 4 bls.
F. Blank, A. Ballin, Hamburg, 27 bls.
Globe Shipping Co., A. Ballin, Hamburg, 22 bls.
A. C. Dodman, Jr., Inc., Samland, Antwerp, 20 bls.
F. & R. Trading Co., Samland, Antwerp, 102 bls.
R. F. Downing & Co., Minnewaska, London, 33 bls., 10 cs.
F. J. Emmerich, Cedric, Liverpool, 21 bls., 13 cs.
A. C. Dodman, Jr., Inc., Berengaria, Southampton, 18 bls.
Meadows, Wye & Co., Alaunia, Liverpool, 2 cs.
Globe Shipping Co., Reliance, Hamburg, 1 ble.

PAPER HANGINGS

A. C. Dodman, Jr., Inc., De Grasse, Havre, 1 cs.
A. C. Dodman, Jr., Inc., Scythia, Liverpool, 46 bls.
W. H. S. Lloyd & Co., Minnewaska, London, 20 bls., 5 cs.

PAINTED PAPER

Hensel, Bruckman & Lorbacher, Paris, Havre, 17 cs.

NEWS PRINT

F. Henjes, Jr., Inc., A. Ballin, Hamburg, 62 rolls.
National City Bank, A. Ballin, Hamburg, 27 rolls.
Brooklyn Times, Gypsum King, Cornerbrook, 779 rolls.
Brooklyn Times, Humberarm, Cornerbrook, 1,287 rolls.
Paper House of Penna., Humberarm, Cornerbrook, 105 rolls.
Clinton Paper Co., Humberarm, Cornerbrook, 10 rolls.
Brooklyn News, Humberarm, Cornerbrook, 889 rolls.
N. Y. Telegram, Humberarm, Cornerbrook, 475 rolls.
Hudson Trading Co., Hjelmaren, Sundsvall, 130 rolls.
H. Reeve Angel & Co., Inc., Stavangerfjord, Bryn, 50 rolls.

PRINTING PAPER

E. Dietzgen & Co., Westerdyk, Rotterdam, 8 cs.
E. Dietzgen & Co., A. Ballin, Hamburg, 48 cs.
J. Henschel & Co., A. Ballin, Hamburg, 4 cs.
Keuffel & Esser, Nordvard, Hamburg, 40 rolls.
Keuffel & Esser, Reliance, Hamburg, 29 rolls.

TRACING PAPER

Keuffel & Esser, Nordvard, Hamburg, 3 cs.

WRAPPING PAPER

R. Wilson Paper Corp., Westerdyk, Rotterdam, 26 bls.
Birn & Wachenheim, Belgenland, Antwerp, 7 cs.
Bendix Paper Co., A. Ballin, Hamburg, 2 cs.
F. C. Strype, Samland, Antwerp, 19 cs.
E. V. Hadley, Samland, Antwerp, 3 cs.

PACKING PAPER

Haule Wax Paper Manfg. Co., A. Ballin, Hamburg, 12 bls.
F. Henjes, Jr., Inc., Pres. Roosevelt, Bremen, 10 cs.

PERGAMYN PAPER

F. C. Strype, A. Ballin, Hamburg, 18 cs.

STENCIL PAPER

Arlac Dry Stencil Co., A. Ballin, Hamburg, 40 cs.
G. W. Sheldon & Co., Minnewaska, London, 2 cs.

PARCHMENT PAPER

Walker, Goulard, Plehn Co., Nordvard, Hamburg, 28 cs.

SURFACE COATED PAPER

P. C. Zuhlke, Belgenland, Antwerp, 155 cs.
Gevaert Co. of America, Samland, Antwerp, 55 cs.
G. W. Sheldon & Co., Minnewaska, London, 2 cs.

COATED PAPER

Globe Shipping Co., A. Ballin, Hamburg, 21 cs.

BASIC PAPER

American Express Co., Samland, Antwerp, 30 cs.

BARYTA COATED PAPER

Globe Shipping Co., Pres. Roosevelt, Bremen, 147 cs.
Globe Shipping Co., Stuttgart, Bremen, 45 cs.

TINFOIL PAPER

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DECALCOMANIA PAPER

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Phoenix Shipping Co., Pres. Roosevelt, Bremen, 1 cs.
B. F. Drakenfeld & Co., Scythia, Liverpool, 26 cs. (duplex).
B. F. Drakenfeld & Co., Scythia, Liverpool, 6 cs. (simplex).

COVER PAPER

International Forwarding Co., Reliance, Hamburg, 8 cs.

COLORED PAPER

Borden Riley Paper Co., Belgenland, Antwerp, 7 cs.
E. Dietzgen & Co., A. Ballin, Hamburg, 77 cs.
E. Daiber, Samland, Antwerp, 7 cs.

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Taiyo Trading Co., Toba Maru, Nagoya, 2 cs.
H. Reeve Angel & Co., Inc., Berengaria, Southampton, 12 bls., 6 cs.
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Keuffel & Esser Co., Nordvard, Hamburg, 19 cs.
Keuffel & Esser Co., Reliance, Hamburg, 27 cs.
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WRITING PAPER

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Globe Shipping Co., Reliance, Hamburg, 1 cs.

TISSUE PAPER

Old Masters Paper & Pulp Corp., A. Ballin, Hamburg, 55 cs.
B. F. Drakenfeld & Co., Scythia, Liverpool, 3 cs.

LITHO PAPER

J. H. & G. B. Siebold, Inc., Pres. Van Buren, Hong Kong, 25 cs.

BLOTTING PAPER

J. & H. Berge, New York City, Bristol, 3 cs.

STRAW BOARD

R. Wilson Paper Corp., Westerdyk, Rotterdam, 156 rolls.
J. P. Heffernan Paper Co., Westerdyk, Rotterdam, 269 rolls.
A. Vuyk, Westerdyk, Rotterdam, 454 rolls.

MISCELLANEOUS PAPER

Keuffel & Esser Co., Westerdyk, Rotterdam, 13 cs.
Globe Shipping Co., Westerdyk, Rotterdam, 9 cs.
J. Beckhard, Westerdyk, Rotterdam, 6 cs.
C. H. Boulin, De Grasse, Havre, 20 cs.
P. J. Schweitzer, De Grasse, Havre, 14 cs.
British American Tobacco Co., De Grasse, Havre, 13 cs.
The Eleto Co., De Grasse, Havre, 4 cs.
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Japan Paper Co., De Grasse, Havre, 3 cs.
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Haviland China Co., De Grasse, Havre, 6 cs.
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H. Reeve Angel Co., Inc., Toba Maru, Yokohama, 2 cs.
C. H. Boulin, Paris, Havre, 16 cs.
P. J. Schweitzer, Paris, Havre, 15 cs.
Henningson Paper Co., Inc., Paris, Havre, 15 cs.
Kadri Bros., Paris, Havre, 2 cs.
Insight Paper Co., Stavangerfjord, Frederickstad, 327 rolls.

RAGS, BAGGINGS, ETC.

Grace National Bank, New York City, Bristol, 194 bls. rags.
Mutnick Bros., Waukegan, Havre, 23 bls. rags.
Lowitt & Co., Waukegan, Havre, 71 bls. rags.
I. Heuerfeld, Roussillon, Bordeaux, 2 bls. rags.
Chase National Bank, Roussillon, Bordeaux, 16 bls. rags.
Castle & Overton, Inc., Roussillon, Bordeaux, 17 bls. rags.
Katzenstein & Keene, Inc., Westerdyk, Rotterdam, 146 bls. bagging.
Phila. Girard National Bank, Westerdyk, Rotterdam, 112 bls. rags.
C. B. Richard & Co., Giulia, Bari, 122 bls. rags.
E. J. Keller Co., Inc., Patria, ——, 196 bls. rags.
J. Cohen Son & Co., Cedric, Liverpool, 51 bls. paper stock.
E. J. Keller Co., Inc., Cedric, Liverpool, 66 bls. rags.
Banco Commerciale Italiana, Bankdale, Marseilles, 359 bls. rags.
American Exchange Irving Trust Co., Bankdale, Malaga, 84 bls. rags.
A. W. Fenton, Inc., Pres. Roosevelt, Bremen, 29 bls. rags.
E. J. Keller Co., Inc., Pres. Roosevelt, Bremen, 64 bls. rags.
Manufacturers Trust Co., Scythia, Liverpool, 44 bls. rags.
L. Leibowitz, Scythia, Liverpool, 14 bls. rags.
Mutnick Bros., Scythia, Liverpool, 34 bls. rags.
Robert Blank, Alaunia, Liverpool, 80 bls. rags.
Goldman, Sachs & Co., Stuttgart, Bremen, 276 bls. rags.
Castle & Overton, Inc., London Mariner, London, 34 bls. rags.
Castle & Overton, Inc., London Mariner, London, 26 bls. bagging.
Castle & Overton, Inc., M. Calvo, Spain, 83 bls. rags.
Castle & Overton, Inc., Argun Maru, Japan, 40 bls. rags.
Castle & Overton, Inc., California, Japan, 32 bls. rags.
Castle & Overton, Inc., Misty Law, Egypt, 104 bls. rags.
American Exchange Irving Trust Co., Nordvard, Hamburg, 27 bls. rags.
Robert Blank, City of Alton, Rotterdam, 200 bls. rags.

OLD ROPE

Brown Bros. & Co., Westerdyk, Rotterdam, 108 coils.
Brown Bros. & Co., Belgenland, Antwerp, 99 coils.
Banco Commerciale Italiana, Bankdale, Marseilles, 20 bls.
Brown Bros. & Co., A. Ballin, Hamburg, 63 coils.
H. J. Reed, Stuttgart, Bremen, 68 coils.

CHINA CLAY

L. A. Solomon & Bros., New York City, Bristol, 35 cks., 240 bags.

CASEIN

National City Bank, Brazilian Prince, Buenos Aires, 250 bags, 33,060 ks.
Hanover National Bank, Tercero, Buenos Aires, 250 bags.

WOOD PULP WADDING

Birn & Wachenheim, Westerdyk, Rotterdam, 50 bls.

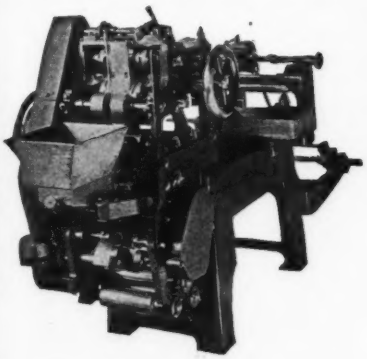
WOOD PULP BOARDS

Lagerloef Trading Co., Nordvard, Hamburg, 90 rolls, 227 bls.

WOOD PULP

M. Gottesman & Co., Inc., Westerdyk, Rotterdam, 1,675 bls. wood pulp.

(Continued on page 60)



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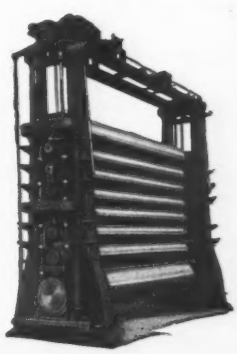

Imports of Paper and Paper Stock

(*Continued from page 58*)

American Exchange Irving Trust Co., A. Baliin, Hamburg, 200 bls. wood pulp, 30 tons.
Bulkley, Dunton & Co., Nordvard, ——, 250 bls. wood pulp.
M. Gottesman & Co., Inc., Hjelmaren, Kotka, 900 bls. wood pulp.
Johanson, Wales & Sparre, Inc., Hjelmaren, Sundsvall, 1,325 bls. sulphite.
Bulkley, Dunton & Co., Hjelmaren, ——, 800 bls. wood pulp.
Perkins, Goodwin & Co., Stavangerfjord, Oslo, 125 bls. wood pulp.
Chemical National Bank, Stavangerfjord, Oslo, 780 bls. wood pulp.
Atterbury Bros., Stavangerfjord, Oslo, 750 bls. wood pulp.
Buck, Kiaer & Co., Inc., Stavangerfjord, Oslo, 1,240 bls. kraft pulp.
Buck, Kiaer & Co., Inc., Korsholm, Stockholm, 1,200 bls. sulphite.

WOOD FLOUR

State Chemical Co., Westerdyk, Rotterdam, 400 bags.
A. Kramer & Co., Westerdyk, Rotterdam, 400 bags.
B. L. Soberski, Stavangerfjord, Frederickstad, 750 bags.

PHILADELPHIA IMPORTS

WEEK ENDING DECEMBER 17, 1927

J. A. Steer & Co., New York City, Bristol, 74 bls. waste paper.
Grace National Bank, New York City, Bristol, 258 bls. rags.
E. A. Stone, City of Flint, London, 60 bls. rags.
J. B. Moors & Co., City of Flint, Hull, 183 bls. rags.
Chase National Bank, Corson, Algiers, 170 bls. rags.
J. H. Whitwell, Waukegan, Havre, 2 cs. wall paper.
Salomon Bros. & Co., Waukegan, Havre, 72 bls. rags.
Castle & Overton, Inc., Waukegan, Havre, 67 bls. rags.
Castle & Overton, Inc., Waukegan, Dunkirk, 234 bls. rags.
J. B. Moors & Co., London Mariner, London, 274 bls. rags.
Robert Blank, London Mariner, London, 108 bls. rags.
Bank of The Manhattan Co., London Mariner, London, 55 bls. rags.
Brown Bros. & Co., London Mariner, London, 29 bls. rags.
J. Lang Paper Co., London Mariner, London, 296 bls. rags.
Phila. Girard National Bank, Ala, Antwerp, 143 bls. rags.
A. Bloch & Co., Ala, Antwerp, 22 bls. rags.
Salomon Bros. & Co., Ala, Antwerp, 14 bls. thread waste.
J. Lang Paper Co., Ala, Antwerp, 178 bls. rags.
Castle & Overton, Inc., Ala, Antwerp, 75 bls. rags.
E. J. Keller Co., Inc., Ala, Antwerp, 180 bls. rags.
A. H. Searle, Ala, Antwerp, 9 bls. rags.
J. A. Steer & Co., Ala, Antwerp, 183 bls. rags.
E. Comer, Ala, Antwerp, 17 coils rope.
Bank of New York, Ossa, Genoa, 297 bls. rags.
Union National Bank, Ossa, Genoa, 65 bls. rags.
Union National Bank, Ossa, Palermo, 169 bls. rags.
Robert Blank, Carenco, Bordeaux, 179 bls. rags.
Robert Blank, Urla, Antwerp, 104 bls. rags.
Castle & Overton, Inc., California, France, 130 bls. rags.
Castle & Overton, Inc., California, France, 10 bls. old rope.

PORTLAND IMPORTS

WEEK ENDING DECEMBER 17, 1927

Pagel, Horton & Co., Inc., Odensholm, Skutskar, 3,600 bls. wood pulp.
Waterfalls Papermills, Odensholm, Gothenburg, 6,000 bls. wood pulp.

BOSTON IMPORTS

WEEK ENDING DECEMBER 17, 1927

G. M. Graves & Co., Inc., Half Moon, Alexandria, 170 bls. rags.
Pagel, Horton & Co., Inc., Odensholm, Skutskar, 9,600 bls. wood pulp.
Scandinavian Pulp Agency, Inc., Odensholm, Skutskar, 1,975 bls. wood pulp.
The Borregaard Co., Inc., Odensholm, Gothenburg, 1,500 bls. wood pulp.
G. W. Millar Co., Inc., Odensholm, Gothenburg, 42 rolls wrapping paper.
C. K. MacAlpine & Co., Odensholm, Gothenburg, 14 bls. wrapping paper.
Johanson, Wales & Sparre, Inc., Odensholm, Gothenburg, 300 bls. sulphate.
E. M. Sergeant & Co., Odensholm, Gothenburg, 449 bls. dry soda pulp.
J. Anderson & Co., Odensholm, Gothenburg, 4,000 bls. sulphite.
Beech Nut Packing Co., Odensholm, Gothenburg, 203 rolls wrapping paper.
Johanson, Wales & Sparre, Inc., Hjelmaren, Sundsvall, 2,300 bls. sulphite.
Perkins, Goodwin & Co., Hjelmaren, Sundsvall, 750 bls. sulphite.
Bulkley, Dunton & Co., Hjelmaren, ——, 250 bls. wood pulp.
Robert Blank, Bolivian, Newcastle, 72 bls. waste paper.
E. J. Keller Co., Inc., Binnendyk, Rotterdam, 48 bls. rags.
E. J. Keller Co., Inc., Wytheville, Rotterdam, 165 bls. rags.
Parsons & Whittemore, Inc., J. Skinner, ——, 270 bls. wood pulp.
Parsons & Whittemore, Inc., J. Skinner, ——, 675 bls. wood pulp.
Parsons & Whittemore, Inc., J. Skinner, ——, 135 bls. wood pulp.
Parsons & Whittemore, Inc., Fernlane, ——, 1,829 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING DECEMBER 17, 1927

Phila. Girard National Bank, Ossa, Naples, 203 bls. rags.
Baltimore Post, Humberarm, Cornerbrook, 2,635 rolls news print.
Washington News, Humberarm, Cornerbrook, 2,034 rolls news print.
Parsons & Whittemore, Inc., Kiel, ——, 1,228 bls. wood pulp.
Parsons & Whittemore, Inc., Kiel, ——, 154 bls. wood pulp.

NEWPORT NEWS IMPORTS

WEEK ENDING DECEMBER 17, 1927

Knoxville News, Humberarm, Cornerbrook, 1,815 rolls news print.
Norfolk Leader, Humberarm, Cornerbrook, 1,783 rolls news print.
Norfolk Post, Humberarm, Cornerbrook, 269 rolls news print.
Bank of Montreal, Humberarm, Cornerbrook, 542 rolls news print.

NEW ORLEANS IMPORTS

WEEK ENDING DECEMBER 17, 1927

American Exchange Irving Trust Co., Giulia, Trieste, 685 bls. wood pulp.
Banco Commerciale Italiana, Giulia, Bari, 549 bls. rags.
Castle & Overton, Inc., Coldbrook, France, 270 bls. rags.
Castle & Overton, Inc., Bruges, Belgium, 228 bls. rags.
Castle & Overton, Inc., Winston Salem, France, 21 bls. rags.
Castle & Overton, Inc., Narbo, Germany, 104 bls. rags.

Senior Pulp and Paper Chemical Engineer

Applications for senior chemical engineer (pulp and paper) must be on file with the Civil Service Commission at Washington, D. C., not later than December 27.

The examination is to fill a vacancy in the Forest Products Laboratory at Madison, Wis., and vacancies occurring in positions requiring similar qualifications.

The salary ranges from $5,200 to $6,000 a year, the entrance salary within the range stated depending upon the qualifications of the appointee as shown in the examination and the duty to which assigned. A probationary period of one year is required; advancement after that depends upon individual efficiency, increased usefulness, and the occurrence of vacancies in higher positions.

The duties are to plan, conduct, and direct research in chemical engineering dealing with forest products and promote the commercial application of laboratory-proved methods and processes. The duties of the position now vacant at the Laboratory involve the technical and administrative supervision of the Pulp and Paper Section of the Laboratory in the conduct of chemical and chemical engineering research in the pulp and paper field.

Competitors will not be required to report for examination at any place, but will be rated on their education, training, experience, and fitness; and writings to be filed with the application.

Full information may be obtained from the United States Civil Service Commission, Washington, D. C., or the secretary of the United States civil service board of examiners at the post office or customs house in any city.

Government Spends $129,184 for Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., December 19, 1927.—At the meeting of the Joint Congressional Committee on Printing last week it was announced that since the adjournment of Congress on March 4 last the Government Printing Office has purchased in the open market $129,184.77 worth of paper.

E. C. Martin Receives Gift

E. C. Martin, who for the past six years has been with the Interlake Tissue Mills Company, Toronto, and for a considerable period was sales and advertising manager, recently resigned. Mr. Martin has been presented by the company with a valuable grandfather's clock as a mark of appreciation and good wishes for his future prosperity and happiness.

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Catalog and Directory Papers
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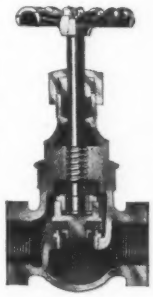

Sectional view Fig. 128 screwed, Jenkins Extra Heavy Bronze Globe Valve

Jenkins Extra Heavy Bronze Valves are recommended for working steam pressures up to and including 300 lbs., working water pressures up to and including 500 lbs. Jenkins Extra Heavy Iron Body Valves are recommended for 250 lbs. steam, 400 lbs. water. A glance at the sectional view shows that the added weight is where it counts. When a Jenkins Valve is recommended for a certain pressure, engineers can safely take it for granted that the valve has plenty of strength for the job. Every Jenkins Valve has passed a wide margin test at the Jenkins factory.

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AUTOMATIC TUBE MACHINES

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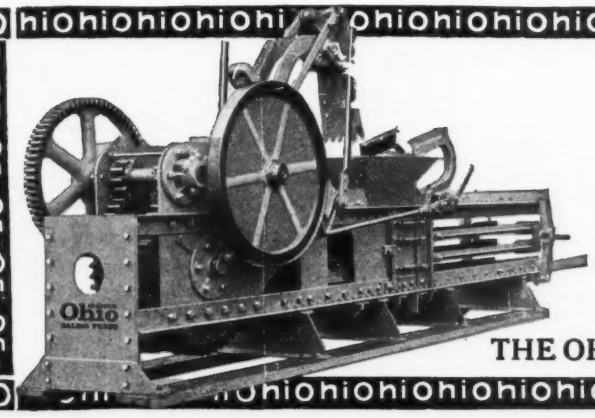

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The nature of this baler is such that it makes a neater and more compact bale.
Every bunch of scrap is packed in by a powerful blow of the plunger.
Made in Three Sizes

THE OHIO CULTIVATOR CO., Bellevue, Ohio

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, December 21, 1927.

Trading in the local paper market has quietened down considerably, as is usual at this time of the year, and practically all the salesmen of the leading paper houses have been called off the road. In many quarters the opinion is expressed that 1927 has been a fairly satisfactory year, while the outlook for the forthcoming year is considered promising. Prices are holding up to schedule in most instances and shading is infrequent.

News print continues in heavy demand and the market is in a better position than for some time. It is anticipated that consumption of news print will be unusually heavy in the forthcoming year, due ot the presidential election and other causes. Contracts are being made at the same quotations which have prevailed during the past twelve months.

Conditions in the paper board market are favorable. Box board and liner board are in particularly good request. Prices are holding up very well. The fine paper market is only moderately active at present but trading should become more lively following the inventory period. The coarse paper market exhibits a strong undertone and wrapping paper continues to move in excellent volume.

Mechanical Pulp

Business in the ground wood market during the past week was fairly good. Prices held up to the quoted levels, in most instances. Production has been proceeding along normal lines and supplies on hand are about sufficient to take care of current requirements. Inquiries for future delivery are fairly numerous and prospects for the forthcoming year are encouraging.

Chemical Pulp

Some slight improvement was noticed in the chemical pulp market during the past week. Now that the closing of navigation on the Baltic is near at hand, prices are becoming steadier and there is little talk of concessions. Contract withdrawals of chemical pulp are moving into consumption in normal volume.

Old Rope and Bagging

Demand for old rope and bagging was only moderate during the past week. Quotations on both imported and domestic old rope are easier. The bagging market remains very quiet and not much change is anticipated until after the turn of the year. Prices of the different grades of bagging have declined slightly.

Rags

The tone of the rag market is practically unchanged. Domestic rags are in moderate request although many of the mills are postponing their purchasing until after the close of the inventory period. No radical price changes have been recorded of late. Offerings of foreign rags are still rather limited, due to conditions abroad.

Waste Paper

Steadiness prevails in the paper stock market although business at present is quiet due to the approach of the Christmas holidays. Book paper stock continues the bright particular feature of the waste paper market and is still in excellent request. A more lively market for the other grades is anticipated in the near future.

Twine

The position of the twine market is satisfactory and the last quarter of the year has been eminently successful. Prices have been steady to firm and concessions have been infrequent. Members of the twine industry are looking forward to the forthcoming year with confidence.

Paper Shipping Closes on Champlain Canal

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., December 17, 1927.—There will be no repetition this year of conditions which prevailed on the Champlain Canal last winter when numerous barges loaded with paper were frozen into the ice. What is believed to be the last paper shipments of the season passed through the canal this week and with the close of navigation iminent no further paper shipments are expected.

Navigation on the canal has been interfered with for several weeks by unusually high water due to the recent heavy rains. Several fleets of barges en route from Canadian points were tied up at various places along the canal because of the high water for several days. A fleet of thirty barges, many of these containing paper shipments from Canada, which had been forced to tie up at Whitehall braved the dangers of high water navigation and made a successful dash for the Hudson early this week when a sudden cold spell threatened a freeze-up similar to last winter.

The past season has seen the Champlain Canal handling a greater tonnage of pulp and paper than has been the case in any season in the history of the canal. Practically all of the Hudson Valley mills, even those situated a considerable distance from the terminals, have been using the water route both for shipping out paper and receiving raw supplies. The Canadian paper mills likewise are making extensive use of the Champlain route in shipping to New York and other Metropolitan points.

Walter A. Poos Resigns

FRANKLIN, Ohio, December 19, 1927.—Announcement has just been made of the resignation of Mr. Walter A. Poos, vice president and sales manager of the Miami Valley Coated Paper Company, Franklin, Ohio, effective January 1, 1928. He became associated with the company at the time of its incorporation in November, 1925, when it took over the property of the Franklin Coated Paper Company. Prior to that time he was assistant sales manager of the Peninsular Paper Company, Ypsilanti, Mich. He has not announced his future plans.

Paterson Parchment Co. Does Not Reduce Prices

The Paterson Parchment Paper Company, Passaic, N. J., writes that the announcement in the Philadelphia letter of the PAPER TRADE JOURNAL of December 15 regarding a reduction of one-half cent per pound in the price of its vegetable parchment papers is misleading and incorrect. It wishes emphatically to state that no such reduction has been made.

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Paper Stock Co.

Paper Manufacturers' Supplies

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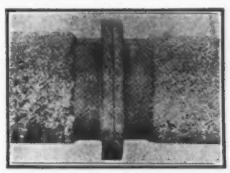
STANDARD-FLANGED-WOOD PIPE



Note: Flange Fits Flush. No Metal on Inside.

Changing the Piping of an entire Industry

It is true that Michigan Wood Pipe with Collar Flanges as illustrated is revolutionizing the Paper Mill Industry. Up to date Paper Mills are making the change as rapidly as possible. Some are changing entire Plant piping at once while others are changing line by line in order that production will not be held up.

The advantages are long life, no discoloration, power saving, larger capacity, light weight, easy to install, easy to take apart without damage, and cheaper.

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LOCKWOOD TRADE JOURNAL CO.
10 East 39th St., New York City

Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, December 21, 1927.

Business continued well up to average during the past week in the local chemical market despite the approach of the holiday season and the nearness of the inventory period. Contract orders for the forthcoming year have been booked in good volume and the schedule of prices is being well maintained. Withdrawals have been moving along at an excellent pace and the outlook for the future is promising.

BLANC FIXE.—Steadiness prevails in the blanc fixe market and the movement of stocks into consumption continues in a normal manner. Prices are generally holding up very well. The pulp is still selling at $60 per ton, in bulk, while the powder is quoted at from 4 cents to 4¼ cents a pound, in barrels, at works.

BLEACHING POWDER.—A moderate amount of contract business is being booked in the bleaching powder market at the prevailing prices. Shipments against standing contracts are moving at a steady rate. Prices remain unaltered. Bleaching powder is offered at from $2 to $2.35 per 100 pounds, in large drums, at works, according to quantity.

CASEIN.—Demand for both imported and domestic casein is persistent and with offerings rather limited prices were decidedly firmer. Domestic casein is now selling at from 18 cents to 18½ cents a pound, all in bags, car lot quantities.

CAUSTIC SODA.—Contract withdrawals of caustic soda are moving in a satisfactory manner. Consumption is well maintained and prices are holding up well, in most instances. Solid caustic soda is quoted at from $3 to $3.10 per 100 pounds. The flake and the ground are selling at from $3.40 to $3.50 per 100 pounds, in large drums, at works. Contract prices for 1928 are slightly lower.

CHINA CLAY.—The china clay market is exhibiting a strong undertone. Supplies are moving into consumption in excellent volume. Prices remain unchanged. Imported china clay is still selling at from $15 to $25 a ton, ship side. Domestic paper makers' clay is quoted at from $8 to $9 a ton, in bulk, at mine, and pulverized at from $10 to $12 a ton.

CHLORINE.—Shipments of chlorine are going forward in good volume. Most of the business transacted at present is for delivery during the first six months of next year. Chlorine is now quoted at 3½ cents a pound, in tanks, or multi-unit cars, at works, on contract orders. The spot quotation ranges from 3¾ cents to 4 cents a pound.

ROSIN.—Conditions in the rosin market continue to improve. Demand has been more persistent of late and prices have advanced materially. At the naval stores, the grades of gum rosin used in the paper mills are now selling at from $8.80 to $8.85 per 280 pounds, gross, in barrels, ex dock. Wood rosin has advanced to $6.50 per 280 pounds, in barrels, southern shipping points.

SALT CAKE.—No changes of importance transpired in the salt cake market during the past week. The demand for this product is steady and prices are being maintained at previously quoted levels. Contract shipments are proceeding in excellent volume. Salt cake is offered at from $18 to $19 a ton, in bulk, at works. Chrome salt cake is quoted at from $14 to $15 a ton, in bulk, at works.

SODA ASH.—The buying movement in the soda ash market is being well maintained and inquiries for next year's delivery are numerous. Shipments against standing contracts have been moving in heavy volume. Prices are fairly steady. Contract prices on soda ash, in car lots, at works, are as follows: in bulk, $1.15; in bags, $1.32; and in barrels, $1.55.

STARCH.—The position of the starch market is unchanged. While offerings are not excessive, stocks on hand appear to be ample for current needs. Shipments are going forward at a normal rate. Special paper makers' starch is still selling at $3.07 per 100 pounds, in bags, and at $3.34 per 100 pounds, in barrels.

SULPHATE OF ALUMINA.—Trading in the sulphate of alumina market was moderately active during the past week. A revival of business is anticipated at the turn of the year. Commercial grades of sulphate of alumina are offered at from $1.40 to $1.45 per 100 pounds. The iron free is quoted at from $2 to $2.05 per 100 pounds, at works.

SULPHUR.—Refiners of sulphur are booking a satisfactory volume of orders for 1928 delivery. The movement of supplies into consumption continues along normal lines. Prices are holding to the level which has prevailed for some considerable time. Sulphur continues to be quoted at from $18 to $19 a ton, in bulk, at mine, according to quantity, on contract orders. The spot quotation is still $20 per ton.

TALC.—The talc market remains practically unchanged. The amount of business being transacted is considered satisfactory for the time of the year and shading is infrequent. Quotations on domestic talc still range from $16 to $18 a ton, at eastern mines. French talc is quoted at from $18 to $22 a ton, ship side.

Kalamazoo Stationery Co. Expands

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., December 12, 1927.—Development of a program that, when completed, will greatly increase the output of the Kalamazoo Stationery Company, is now in progress at that plant, according to John Vincent, general manager. The concern has recently erected buildings having over 100,000 square feet of floor space to facilitate packing and shipping. One is a modern type daylight structure, extending north from the present main plant and having sidetrack facilities from the Chicago, Kalamazoo and Saginaw railroad. The second structure is an addition that faces on Harrison street and will afford much greater capacity for loading and unloading trucks.

In the manufacturing departments proper, a great many changes are being made, consisting largely, according to Mr. Vincent in re-locating machinery to provide for much greater efficiency in production.

"We are working out a program for future production methods," said Mr. Vincent, "that will be as complete and far reaching in its results as any that has ever been undertaken in any stationery plant in America. Every manufacturing operation will provide for a forward movement, similar in certain details to those found in the modern automobile plant. There will be no backward steps, no lost motion. At the same time we will be able to make the work more satisfactory for our help. The same plan was put into effect in our St. Joseph, Mo., plant and worked out splendidly."

Comparatively few of the residents of Kalamazoo, who have for years considered the Kalamazoo Stationery Company as makers of stationery and tablets, realize this concern has added a new department, that of making greeting cards, which promises in a few years to rival other units in value of its output. During 1927 there were over 16,000,000 cards manufactured and sold. Work has started on the 1928 program and Mr. Vincent expects that sales next year will exceed 30,000,000 cards.

The cards made by the local concern are largely in the popular priced lines, those that retail at from five cents to 25 cents each. There are hundreds of very attractive designs, each card of course having its own special type envelope, some being lined and some unlined.

U. S. Envelope Co. Opens New Chicago Offices

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, Ill., December 19, 1927.—The local offices of the United States Envelope Company, of Springfield, Mass., are now situated in the Adams-Franklin Building, 222 West Adams street. A feature of the new location is a display room where clients may inspect samples of envelopes and specialties. These new offices, with C. H. Geraghty as manager and J. B. Ahart as assistant manager, will represent all the different divisions of the United States Envelope Company.

Features of U. Dyestuff Service

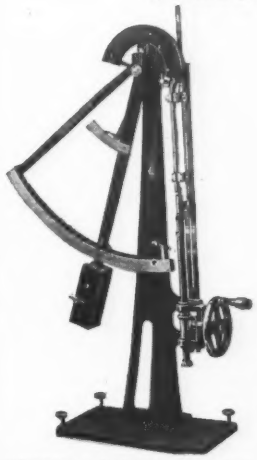
RELIABILITY. Heller & Merz Colors may be depended upon to deliver the essential dyestuff feature—quality. Heller & Merz Service has been developed to keep pace with the needs of dyestuffs users. Both dyestuffs and service are reliable in the fullest sense.

The HELLER & MERZ COMPANY
505 Hudson St., New York

Boston 287 Atlantic Ave. | Chicago 146 W. Kinzie St. | Philadelphia 114 Market St.
Springfield, Mass. 24 Lester Street

Factory—NEWARK, N. J.

SCHOPPER
PAPER TESTERS
THE WORLD'S STANDARD



TENSILE STRENGTH AND STRETCH TESTER

ORIGINAL DESK MICROMETER
Mechanically perfect and scientifically accurate. Absolutely dependable.

PAPER SCALES, FREENESS TESTER, FOLDING TESTER, CONDITIONING OVENS.

FOREIGN PAPER MILLS, Inc.
72 DUANE ST. NEW YORK
SOLE AGENTS
UNITED STATES CANADA

SOME PAPER MILL USERS OF
Badenhausen Boilers
Superheaters :: Preheaters

Geo. F. Hardy, Consulting Engineer, New York
For Southern Paper Co., two orders, total 4700 H.P.
For St. Croix Paper Co. ..... 1200 H.P.
For Brown Paper Mill Co. ..... 3430 H.P.
Central Paper Co., Muskegon, Mich., four orders, total ..... 3100 H.P.
Philadelphia Paper Mfg. Co., Phila., three orders, total ..... 2400 H.P.
Jessup & Moore Paper Co., Phila., four orders, total ..... 4750 H.P.
Ontario Paper Co., Ltd.
For Daily Newspaper Co., North Tonawanda, N. Y. ..... 2034 H.P.
Filer Fibre Company, Filer City, Mich. ..... 1500 H.P.
John Lang Paper Co., Philadelphia, Pa. ..... 416 H.P.
Bayless Manufacturing Corp., Austin, Pa. ..... 1300 H.P.
Northern Board & Paper Co., San Francisco, Cal., two orders, total ..... 400 H.P.
Crown Willamette Paper Co., San Francisco, Cal., two orders, total ..... 750 H.P.
Delaware Hard Fibre Co., Wilmington, Del., two orders, total ..... 920 H.P.
Kieckhefer Container Co., Delair, N. J. ..... 1800 H.P.

Badenhausen Corporation
Reg. U. S. Pat. Off.
GENERAL OFFICE, 1011 CHESTNUT ST.
PHILADELPHIA, PA., U. S. A.

120 Broadway, New York | 211 Tramway Bldg., Denver
Reibold Bldg., Dayton, O. | 513 House Bldg., Pittsburgh
1019 Guardian Life Bldg., St. Paul

Clay
300 tons daily
AMERICAN MADE FOR AMERICAN TRADE

AT LAST!!

"An American Coating Clay"

H. T. Brand Coating Clay, Highest Grade Filling Clay, being used in some of the largest paper mills in the country. Send for samples and article on ***"An American Coating Clay."*** Forty-two years experience in American washed clays are back of this product.

Let us submit sample and quote you.

THE
EDGAR BROS. CO.
50 Church St.,
NEW YORK

Market Quotations

Quoted by Hepburn & Co., 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Advance Bag & Paper, 7s 1943	105	107
A. P. W. Pulp & Power, 7s 1945	101	102
American Writing Paper, 6s 1947	80	82
Bastrap Pulp & Paper, 6½s 1940	100	103
British Columbia Pulp & Paper, 6s 1950	85	90*
Beaver Products Corp., 7½s 1942	106	109
Bedford Pulp & Paper, 6½s 1942	98½	None
Brown Paper Co., 1st 5½s 1946	96½	99
Bryant Paper Co., 6s 1942	100½	102
Cape Breton Pulp & Paper, 6s 1932	101	103
Central Paper, 7s 1933	85	None
Central Paper Serial 6, 6½s 1942	89	...
Champion Coated Paper, 6s 1926 to 1932	99	...
Champion Fibre, 8s 1930	100	...
Champion Paper Corp'n, 1st 6s 1945	95	97
Continental Paper Products, 6½s 1943	88	91½
Cornell Wood Prod., 7½s 1937	100	104*
Crown Willamette Paper, 6s 1951	100	102
Donnaconna Paper, 6s 1940	101	102½
Dells Paper & Pulp Serial, 6s 1926-38	*95	...
Eastern Mfg. Co., 7s 1938	89	91
Eddy Paper, 7½s 1931	101	103
Escanaba Paper Serial, 6s 1928	99¾	...
Filer Fibre Serial, 7s 1926-39	95	...
Fort Orange Paper, 7s 1942	99	102
Fox River Paper, 7s 1931	99	...
Gair Company, 5½s 1942	96	99
Gilbert Paper Co., 6½s 1926-29	91	None
Hammermill Paper, 6s 1939	100	103*
Hoberg Paper & Fibre, 7s 1937	94½	96
Itaska Paper & Prairie River Power, J+5½s 1926-38	99	101
Itaska Paper, 1st 6s 1933-38	99	101
Kalamazoo Veg. Parchment, 6s 1938	98	...
Marinette & Menominee, 7½s 1936	100	103
Menasha Printing & Carton, 6½s 1939	99½	...
Monroe Paper Products, 7½s 1932	96	...
Munising Paper, 6s 1927-36	96	100
Nekoosa Edwards, 1st Ref. 6s 1928 to 1942	96	99*
Orono Pulp & Paper, 6s 1943	98	...
Orono Pulp & Paper, 5s 1941	94	...
Oswego Falls Corp., 6s 1941	98	100*
Oxford Paper, 6s 1947	104	...
Paepcke Paper Mills, 7s 1930	99	None
Parsons Pulp & Lumber, 7s 1928	97	...
Parker Young Co., 6½s 1944	96½	98½
Paterson Parchment Paper, 6s 1938	100½	102
Penobscot Chemical Fibre, 6s 1942	98	...
Queens City Paper, 7s 1932	95	100*
Richardson Co., 6s 1938	100	...
River Raisin Paper, 6s 1936	96	...
Spanish River Pulp & Paper, 8s 1941	108	110
Stevens & Thompson Paper, 6s 1942	93	95
St. Anne Paper, 6½s 1946	99	101
St. Croix Paper, 5s 1926-37	95	98*
St. Regis Paper Serial, 6½s 1926-35	99½	101
Tait Paper & Color Industries, 6s 1934	90	95
Taggart Bros. Co., 6s 1944	94	97
Ticonderoga Pulp & Paper, 5s 1930	94	98
Ticonderoga Pulp & Paper, 6s 1940	99	101
Warren (The S. D.) Company, 6s 1945	99	101
Wotab Paper, 6½s 1943	102	...
Westfield River Paper, 7s 1926-43	90	...
Whitaker Paper, 7s 1942	106	108

STOCKS	BID	ASKED
American Box Board, Pfd.	8	10
American Box Board, Com.	8	10
Am. Tissue Mills, 7% Pfd.	90	100
British Columbia P. & P., Pfd.	65	70
Brompton Pulp & Paper, 8% Pfd.	93	98*
Brown Corpn., 7% Pfd.	97	100*
Champion Fibre, 7% Pfd.	105	...
Diem & Wing, 7% Cum. Pfd.	90	...
Donnaconna Paper, Com.	65	70
Donnaconna Paper, Pfd.	100	103
Eastern Mfg. Co., 1st Pfd.	34	37
Great Northern Paper, Com.	70	75
Hammermill Paper, 7% Pfd.	105	110
Hinde & Dauch, Com.	135	...
Hinde & Dauch, Pfd.	100	...
Holyoke Card & Paper	150	None
Marathon Paper Mills, Com.	125	...
Midwest Box Co., Pfd. 8%	97	99
Midwest Box Co., Pfd. 6%	90	92
Louis De Jonge Co., 7% Pfd.	93	96
Oxford Papers, Com.	160	170
Oxford Paper Co., Pfd.	175	...
Penobscot Chemical Fibre, Com.	65	75*
Richardson Co., 7% Pfd.	104	...
Rubberoid Company	74	77
Seaman Container, Class B (par $1)	1	None Off.
Seaman Paper Co.	Wanted	None Off.
St. Croix Paper	150	170
St. Regis Paper Co., 7% Cum. Pfd.	101½	104½
Westfield River Paper Co., 1st Pfd.	Wanted	None Off.
West Virginia Pulp and Paper, Com.	50	55
West Virginia Pulp and Paper, Pfd.	100	103
Whittaker Paper, 7% Cum. Pfd.	98	103

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.25	@ —
Rolls, transient	3.25	@ 3.50
Sheets	3.65	@ 3.85
Side Runs	3.00	@ 3.75
Book, Cased—		
S. & S. C.	6.35	@ 7.75
M. F.	6.25	@ 7.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream—		
White No. 1	.75	@ 1.00
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.75	@ .85
Kraft	.90	@ 1.00
Manila	.75	@ .85
Kraft—		
No. 1 Domestic	6.25	@ 6.50
No. 2 Domestic	5.25	@ 5.50
Southern	4.25	@ 4.50
Imported	6.50	@ 7.00
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	5.00	@ 5.50
No. 2 Fibre	4.75	@ 5.25
Common Bogus	2.75	@ 3.00
Screenings	3.00	@ 3.25
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

(Delivered New York)

Boards—per ton—		
News	50.00	@52.50
Straw	53.50	@57.50
Chip	47.50	@50.00
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	57.50	@60.00
Wood Pulp	80.00	@85.00
Container	67.50	@72.50

Mechanical Pulp

(Ex-Dock)

No. 1 Imported—		
Moist	28.00	@30.00
Dry	32.00	@34.00

(F. o. b. Mill)

No. 1 Domestic	26.00	@30.00
Screenings	15.00	@20.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	3.40	@ 4.50
Easy Bleaching	2.65	@ 2.80
No. 1 strong unbleached	2.40	@ 2.65
Mitscherlich unbleached	2.55	@ 3.25
No. 2 strong unbleached	2.30	@ 2.40
No. 1 Kraft	2.55	@ 2.75
No. 2 Kraft	2.40	@ 2.50
Sulphate—		
Bleached	3.65	@ 3.85

(F. o. b. Pulp Mill)

Sulphite (Domestic)—		
Bleached	3.20	@ 4.75
Easy Bleaching Sulphite	2.60	@ 2.75
News Sulphite	2.40	@ 2.65
Mitscherlich	3.25	@ 3.70
Kraft (Domestic)	2.60	@ 3.30
Soda Bleached	3.25	@ 3.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.50	@ 1.85

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	11.75	@12.25
New White, No. 2	8.00	@ 8.50
Silesias No. 1	7.25	@ 7.75
New Unbleached	10.50	@11.00
Washables	4.25	@ 4.75
Fancy	5.50	@ 6.00
Blue Overall	6.75	@ 7.25
New Blue Prints	5.25	@ 5.50
New Soft Blacks	5.25	@ 5.75
Mixed Khaki Cuttings	4.75	@ 5.25
Pink Corset Cuttings	8.00	@ 8.50
O. D. Khaki Cuttings	5.25	@ 5.75
Men's Corduroy	3.75	@ 4.25
New Mixed Blacks	3.50	@ 3.75

Old Rag

White, No. 1—		
Repacked	5.75	@ 6.50
Miscellaneous	4.75	@ 5.25
White, No. 2—		
Repacked	3.25	@ 3.75
Miscellaneous	2.75	@ 3.00
St. Soiled, White	2.25	@ 2.40
Thirds and Blues—		
Repacked	2.25	@ 2.50
Miscellaneous	1.75	@ 2.00
Black Stockings	3.25	@ 3.75
Roofing Rags—		
Cloth Strippings	1.70	@ 1.80
No. 1	1.70	@ 1.80
No. 2	1.50	@ 1.60
No. 3	1.30	@ 1.40
No. 4	1.25	@ 1.35
No. 5A	.95	@ 1.05

Foreign Rags

New Light Silesias	7.00	@ 7.50
Light Flannelettes	7.75	@ 8.50
Unbleached Cottons	10.00	@11.00
New White Cuttings	10.50	@11.50
New Light Oxfords	7.00	@ 7.50
New Light Prints	5.50	@ 6.50
New Mixed Cuttings	3.00	@ 3.50
New Dark Cuttings	2.75	@ 3.25
No. 1 White Linens	7.25	@ 8.00
No. 2 White Linens	5.50	@ 6.25
No. 3 White Linens	4.50	@ 5.00
No. 4 White Linens	3.00	@ 3.50
Old Extra Light Prints	2.75	@ 3.25
Ord. Light Prints	2.25	@ 2.50
Med. Light Prints	1.90	@ 2.10
Dutch Blue Cottons	2.25	@ 2.50
German Blue Linens	2.50	@ 2.75
German Blue Cottons	2.00	@ 2.25
Checks and Blues	1.75	@ 2.00
Lindsay Garments	1.85	@ 1.95
Dark Cottons	1.65	@ 1.70
Shoppery	1.55	@ 1.60
French Blues	2.25	@ 2.50

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.60	@ 1.65
Domestic	1.70	@ 1.75
Wool Tares, light	1.60	@ 1.65
Wool Tares, heavy	1.60	@ 1.65
Bright Bagging	1.60	@ 1.65
Small Mixed Rope	1.30	@ 1.50
Manila Rope—		
Foreign	3.25	@ 3.60
Domestic	3.75	@ 4.00
New Burlap Cut	2.75	@ 3.00
Hessian Jute Threads—		
Foreign	3.50	@ 4.00
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.40	@ 3.65
Hard, White, No. 2	2.90	@ 3.05
Soft, White, No. 1	2.90	@ 3.10
Flat Stock—		
Stitchless	1.40	@ 1.45
Overissue Mag.	1.40	@ 1.45
Solid Flat Book	1.30	@ 1.35
Crumpled No. 1	1.05	@ 1.10
Solid Book Ledger	1.90	@ 2.10
Ledger Stock	1.70	@ 1.75
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.40	@ 2.60
New Cuttings	1.60	@ 1.85
Extra No. 1 old	1.25	@ 1.35
Print	.85	@ .95
Container	.70	@ .80
Bogus Wrapper	.75	@ .85
Old Kraft Machine Compressed bales	2.10	@ 2.20
News—		
No. 1 White News	1.75	@ 1.85
Strictly Overissue	.85	@ .90
Strictly Folded	.70	@ .75
No. 1 Mixed Paper	.55	@ .60
Common paper	.35	@ .45

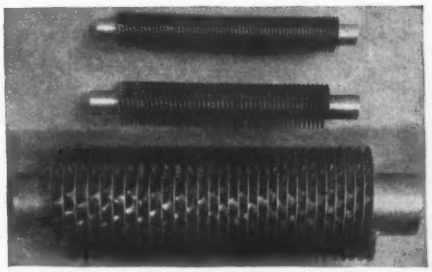
Specify

KRADIAFIN TUBES

for air-heating and air-cooling units

They have 6 to 10 times as much surface as plain tubes of same size and their use insures greater capacities with fewer tubes.

½" to 6"—High or low pressure—Lengths up to 15 feet. Plain or flanged ends—With or without headers—Quantity Production.



These tubes will be on display at the N. Y. power show, Dec. 5-10.

SCHUTTE & KOERTING CO., 1255 N. 12th Street PHILADELPHIA, PA.

Dayton High Speed Beaters

—Advantages—
Heavier Furnishes
Faster Beating
Greater Output
More Uniform Product
Saving in Power
Saving in Labor

Eastern Representatives:
E. K. Mansfield & Co.
501 5th Ave., New York

The Dayton Beater & Hoist Co., Dayton, O.

SAVEALLS AMERICAN CONTINUOUS FILTER DECKERS THICKENERS UNITED FILTERS CORP. HAZLETON, PA. BLEACH WASHERS

Bristol's Recording Instruments

For Pressure, Vacuum, Temperature, Liquid Level, Humidity, Speed, Electric Units, etc.

The Bristol Company Waterbury, Connecticut

BRISTOL'S RECORDING INSTRUMENTS

Bailey Meter Company

2041 East 46th St., Cleveland, Ohio.

Specializing in

Power Plant Metering Equipment

Our Worm Gear Speed Reducers represent the most advanced engineering and the highest type of precision manufacture. Used in many basic industries. Write for Bulletin 251—of interest to you.

THE HORSBURGH & SCOTT CO.

"Gear makers since '89"

5112 Hamilton Ave. Cleveland, U. S. A.

A more uniform stock refinement with less power consumption per ton of stock prepared is possible with the BALL BEARING TYPE APPLETON JORDAN

WRITE TODAY FOR BOOKLET - 5 POINTS OF IMPROVED JORDAN PERFORMANCE

THE APPLETON MACHINE COMPANY · APPLETON, WIS.

CHIP SCREENS
CHIP BREAKERS
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LOG HAULS
SPLITTERS

GENERAL Aluminum Sulphate CHEMICAL

GENERAL CHEMICAL COMPANY 40 RECTOR STREET, NEW YORK

SINCE 1887

Biggs Globe and Cylinder Rotary Bleaching Boilers have become known in every part of the world as standard paper-plant equipment. Repeated installations indicate very positively the complete satisfaction of our old customers.

THE BIGGS BOILER WORKS CO.

AKRON, 20, OHIO

Fourdrinier Wires, all widths up to 300 inches

DIMOND WIRES

NEUMEYER & DIMOND

Established 1904

82-92 Beaver St. New York

Twines

(F. o. b. Mill)

Cotton—			
No. 1	.39	@	.40
No. 2	.37	@	.38
No. 3	.36	@	.37
B. C., 18 basis	.38	@	.40
A. B. Italian, 18 basis	.48	@	.53
Finished Jute—			
Dark 18 basis	.24	@	.25
Light 18 basis	.27	@	.28
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.20	@	.22
Tube Rope—			
4-ply and larger	.18	@	.19
Fine Tube Yarn—			
5-ply and larger	.23	@	.27
4-ply	.24	@	.28
3-ply	.26	@	.30
Unfinished India—			
Basis	.16	@	.17
Paper Makers Twine			
Balls	.13	@	.15
Box Twine, 2-3 ply	.17	@	.19
Jute Rope	.21	@	.23
Ameri. Hemp, 6	.29	@	.31
Sisal Hay Rope—			
No. 1 Basis	.18	@	.20
No. 2 Basis	.16	@	.18
Sisal Lath Yarn—			
No. 1	.16	@	.18
No. 2	.14	@	.16
Manila Rope	.24	@	.26

CHICAGO

All Rag Bond	.35	@	.41
No. 1 Rag Bond	.25	@	.35
No. 2 Rag Bond	.14	@	.25
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.06¾	@	.11
Superfine writing	.18	@	.24
No. 1 fine writing	.14	@	.18
No. 2 fine writing	.12	@	.14
No. 3 fine writing	.08½	@	.12
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
News—Roll, mill	.03½	@	.04¼
News—Sheets, mill	.03¾	@	.04¾
No. 1 Manila	.04¼	@	.05¾
No. 1 Fibre	.04¾	@	.05¼
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.04	@	.04½
No. 1 Kraft	.05¾	@	.06¼
Southern Kraft	.04½	@	.05
No. 2 Kraft	.05	@	.05¼
Wool Tag Boards	.04¼	@	.06¼
Sulphite Screenings	.03	@	.03¼
Manila Tissue—			
24x36 Sheet	.07	@	.07¾
White Tissue—			
20x30 Sheet	.07¼	@	.07½
Boards, per ton—			
(Delivered Central Territory)			
Plain Chip	45.00	@	—
Solid News	47.50	@	—
Manila Lined Chip	55.00	@	—
Container Lined—			
(Delivered Central Territory)			
85 Test	65.00	@	70.00
100 Test	70.00	@	—

Old Papers

(F. o. b. Chicago)

Shavings—			
No. 1 Hard White	2.80	@	2.90
White Env. Cuttings	3.60	@	3.70
No. 1 Soft Shavings	2.50	@	2.60
No. 1 Mixed	1.00	@	1.05
No. 2 Mixed	.95	@	1.00
Ledger & Writings	1.55	@	1.65
Solid Books	1.20	@	1.30
Blanks	1.75	@	1.80
Krafts	1.90	@	2.00
New Kraft Cuts	2.25	@	2.35
Manila Envelope Cuttings	2.00	@	2.10
Ex. No. 1 Manila	1.55	@	1.65
Print Manila	.90	@	1.00
Folded News (overissue)	.60	@	.70
Old Newspapers—			
No. 1	.65	@	.70
No. 2	.60	@	.65
Mixed Papers—			
No. 1	.70	@	.80
Roofing Stocks—			
(F. o. b. Chicago, net cash)			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper

(F. o. b. Mill)

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2	.16	@	.25
Fine, No. 3	.12	@	.20
Book, M. F.	.06	@	.07
Book, S. S. & C.	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila	.08½	@	.09
Manila Sul., No. 1	.04½	@	.06
Manila, No. 2	.04	@	.04½
No. 2 Kraft	.05¼	@	.05½
No. 1 Kraft	.06	@	.06¼
Common Bogus	.02¾	@	—
Straw Board	60.00	@	65.00
News Board	47.50	@	50.00
Chip Board	42.50	@	45.00
Wood Pulp Board	4.50	@	5.00
(Carload Lots)			
Binder Boards—			
No. 1, per ton	85.00	@	90.00
No. 2, per ton	70.00	@	75.00
Carload lots	60.00	@	65.00
Tarred Felts—			
Regular	66.00	@	68.00
Slaters	70.00	@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply	2.10	@	2.15
No. 1 Mixed Paper	.65	@	.70

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.11½	@	.12
New White, No. 2	.07	@	.07½
Light Silesias	.07	@	.07½
Silesias, No. 1	.07½	@	.08
Black Silesia, soft	.05	@	.05½
New Unbleached	.10½	@	.11
Washable	.04	@	.04½
Fancy	.05½	@	.06
Cottons—according to grades—			
Blue Overall	.07½	@	na
New Blue	—	@	.04
New Black Soft	.05½	@	.06
New Light Seconds	.03	@	.03½
Khaki Cuttings	.04½	@	.05
Corduroy	03	@	.03¾
New Canvas	.08	@	.09½
New Black Mixed	.05	@	.05½

Bagging

(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.75	@	2.00
Domestic	1.75	@	2.00
Manila Rope	3.50	@	4.00
Sisal Rope	1.25	@	2.00
Mixed Rope	1.10	@	1.25
Scrap Burlaps	1.50	@	1.75
Wool Tares, heavy	3.00	@	3.50
Mixed Strings	1.25	@	1.35
No. 1, New Light Burlap	2.50	@	2.75
New Burlap Cuttings	—	@	2.50

Old Papers

(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.75	@	3.00
No. 2 Soft White	1.90	@	2.00
No. 1 Mixed	1.50	@	1.60
No. 2 Mixed	.90	@	1.00
Solid Ledger Stock	1.90	@	2.00
Writing Paper	1.65	@	1.75
No. 1 Books, heavy	1.25	@	1.30
No. 2 Books, light	.85	@	.90
No. 1 New Manila	2.40	@	2.50
No. 1 Old Manila	1.50	@	1.60
Print Manila	1.15	@	1.20
Container Manila	.90	@	1.00
Old Kraft	2.00	@	2.20
Common Paper	.55	@	.60
No. 1 Mixed Paper	.60	@	.75
Straw Board, Chip	.65	@	.75
Binders Board, Chip	.65	@	.75
Overissue News	.75	@	.85
Old Newspaper	.60	@	.70

Domestic Rags (Old)

White, No. 1—			
Repacked	4.50	@	5.25
Miscellaneous	3.50	@	4.00
White, No. 2—			
Repacked	.02¼	@	.02¾
Miscellaneous	.02	@	.02¼
Thirds and Blues—			
Repacked	2.50	@	2.75
Miscellaneous	1.60	@	1.75
Black Stockings	3.50	@	3.75
Roofing Stock—			
No. 1	1.75	@	1.80
No. 2	1.60	@	—
No. 3	—	@	1.35
No. 4	1.10	@	1.20
No. 5A	.90	@	1.00
B	.80	@	.90
C	.80	@	.90

BOSTON

Paper

(F. o. b. Mill)

Ledgers—			
Sulphite	.07½	@	.15
Rag content	.15	@	.30
All rag	.38	@	.52½
Bonds—			
Sulphite	.06½	@	.11½
Rag content	.15	@	.30
All rag	.36½	@	.65
Writings	.07	@	.20
Superfines	.11	@	.31
News	.03½	@	.04
Book, Super	.06	@	.09
Book, M. F.	.05¾	@	.08½
Book, Coated	.08½	@	.20
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06½
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	.05½	@	.06½
No. 2 Kraft	.04¼	@	.05½
Common Bogus	.02¼	@	.02¾
Delivered New England points			
Straw Board, rolls .009	57.50		
Straw Board in Sheets, basis 35s to 70s	54.50	@	55.00
Filled News Board	50.00		
Chip Board	47.50		
Single Manila Pulp lined board	55.00	@	60.00
Single White, patent coated board bender	75.00	@	82.50
Wood Pulp Board	80.00	@	85.00
Binder Boards	70.00	@	75.00
(F. o. b. Mill)			
Tarred Felts—			
Regular, carload lots	65.00	@	—

Old Papers

(F. o. b. Boston)

Shavings—			
No. 1 Hard White	2.75	@	3.10
No. 2 Hard White	2.60	@	2.90
No. 1 Soft White	2.60	@	—
No. 1 Mixed	1.10	@	1.15
No. 2 Mixed	.85	@	.90
Solid Ledger Stock	1.95	@	2.00
No. 1 Books, Heavy	1.35	@	1.45
No. 1 Books, Light	—	@	1.15
Manila Env. Cuttings	2.00	@	2.25
No. 1 Old Manila	1.40	@	1.60
White Blank News	1.75	@	—
Old Kraft	2.00	@	2.20
Print Manila	.70	@	.80
No. 1 Mixed Paper	.55	@	.60
Overissue News	.70	@	.80
Old Newspapers	.65	@	—
Box Board, Chip	.65	@	—

Bagging

(Price f. o. b. Boston)

Gunny No. 1—			
Foreign	1.40	@	1.50
Domestic	1.50	@	1.60
Manila Rope and Strings—			
Foreign	—	@	3.00
Domestic	—	@	3.50
Mixed Strings	.90	@	1.00
Scrap Burlaps	1.37½	@	1.50
Wool Tares, heavy	—	@	1.50
New Burlap Cutting	2.25	@	2.37½

Domestic Rags (New)

(Price f. o. b. Boston)

Shirt Cuttings—			
New White No. 1	.11	@	.11½
Silesias, No. 1	.07	@	.07½
New Unbleached	.09½	@	.10
Fancy	.05	@	.05½
Washable	.04	@	.04½
Cottons—Acording to			
Blue Overalls	.07	@	.07½
Blue Overalls	.07½	@	—
New Black, soft	.04	@	.04¼
Khaki Cuttings	.04¾	@	.05¼
Corduroy	.03	@	.03½
New Canvas	.08	@	.08½

Domestic Rags (Old)

(Price f. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	5.50	@	5.75
Miscellaneous	5.00	@	—
White No. 2—			
Repacked	.04½	@	.05
Miscellaneous	.03½	@	.04
Thirds and Blues—			
Repacked	2.00	@	2.12½
Miscellaneous	1.75	@	1.90
Roofing Stock—			
No. 1	1.60	@	—
No. 2	1.40	@	—
No. 3	1.00	@	—
No. 4	1.00	@	1.10

Foreign Rags

(F. o. b. Boston)

Dark Cottons	1.65	@	—
New No. 1 Shirt Cuttings	11.00	@	11.50
Dutch Blues	2.00	@	—
Lace Curtains	5.00	@	5.25
New Checks & Blues	4.50	@	4.65
Old Fustians	1.80	@	—

TORONTO

Paper

(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.12½	@	—
No. 2 Sulphite	.10¾	@	—
No. 1 Colored	.13½	@	—
No. 2 Colored	.11¾	@	—
Ledgers (sulphite)	—	@	—
Ledgers, No. 1	.36	@	—
Ledgers, No. 2	.27	@	—
Writing	.09½	@	.10
News f. o. b. Mills—			
Rolls (carloads)	3.25	@	—
Sheets (carloads)	3.75	@	—
Sheets (2 tons or over)	4.00	@	—
Book—			
No. 1 M. F. (carloads)	7.75	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.25	@	—
No. 1 S. C. (carloads)	8.25	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.75	@	—
No. 1 Coated and Litho	14.50	@	—
No. 2 Coated and Litho	13.50	@	—
No. 3 Coated and Litho	12.75	@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.85	@	—
White Rag	5.25	@	—
"B" Manila	5.65	@	—
No. 1 Manila	6.65	@	—
Fiber	6.65	@	—
Kraft, M. F.	7.20	@	—
M. G.	7.35	@	—

Pulp

(F. o. b. Mill)

Ground wood	25.00	@	28.00
Sulphite easy bleaching	58.00	@	61.00
Sulphite news grade	55.00	@	58.00
Sulphite, bleached	75.00	@	—
Sulphate	65.00	@	—

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.00	@	—
Soft White Book Shavings	3.00	@	—
White Blk, News	1.50	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.25	@	—
Light and Crumpled Book Stock	1.10	@	—
Ledgers and Writings	1.50	@	—
Solid Ledgers	1.50	@	—
Manilas—			
New Manila Cut	1.50	@	—
Printed Manilas	1.00	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.80	@	—
Strictly Folded	.47½	@	.52½
No. 1 Mixed Paper	.60	@	—

Domestic Rags

(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.12	@	.12½
Fancy Shirt Cuttings	.06	@	.06½

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WANTED—Competent superintendent for two machine tissue mill manufacturing tissue and crepe. This is an excellent opportunity for a man whose past records show he can produce good results. Address, Box 27-795, care Paper Trade Journal. D-22

WANTED—Experienced beaterman in Virginia mill making colored kraft and specialties. Address, Box 27-794, care Paper Trade Journal. D-22

EXPERIENCED AND COMPETENT Rogers Wet Machine operator. Must be familiar with operation of Bird Screens and Improved Thickeners. 8 hour tours. Location Pacific Northwest. Address, Box 27-804, care Paper Trade Journal. J-5

MILL MANAGER WANTED—A well-known corporation has an opening for a thoroughly competent man as manager of a group of small paper mills. Applicants should state age, education, technical training, positions held and salary expected. Sales experience necessary and graduate of technical school preferred. Address, Box 27-805, care Paper Trade Journal. D-22

WANTED—Machine tender to run 100 inch machine making high grade papers. Wages 75 cents per hour, 12 hour day, steady work. State age, experience, and furnish references. Address, Box 27-806, care Paper Trade Journal. J-5

WANTED—First-class boxboard machine tender; preference given to man experienced on straw; very slow running special machine. Good future. Address, Box 27-807, care Paper Trade Journal. D-29

WANTED—Machine tender for Connecticut mill, running combination boards at high speed. Address, Box 28-808, care Paper Trade Journal. D-22

PROMINENT DYESTUFF CONCERN wishes to engage the services of a man with theoretical and practical knowledge of the manufacture and coloring of paper. Sales ability desired as the position offered is that of a salesman as well as demonstrator. Only reliable men who can furnish best references will be considered. State full particulars and salary expected. Please address Box 27-809, care Paper Trade Journal. D-22

MACHINE TENDER WANTED—Running board machine on high grade test liners and box board. State experience with names of mills, also age. Address, Box 27-732, care Paper Trade Journal. J-12

WANTED—First-class steady, reliable Yankee tissue machine tender. Mill located in middle west. Address, Box 27-767, care Paper Trade Journal. D-22

WANTED—Man to take charge of beater room in two machine board mill in northern Wisconsin. Position requires previous experience in manufacture of boards. Applicant must be capable of assuming full charge, being a supervisor of proven ability. Address, Box 27-781, care Paper Trade Journal. D-22

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HELP WANTED

WANTED—Beater Engineer Tour Boss experienced in bonds, book, Kraft, manila, wrapping. Must be good on colors. State experience and salary expected. Address, Box 27-783, care Paper Trade Journal. D-22

WANTED—Experienced salesman to represent wrapping paper mill in Middle West. Address, Box 27-785, care Paper Trade Journal. D-22

PAPER MILL machinery designer wanted. State experience, salary expected. Address, Box 27-718, care Paper Trade Journal. tf.

IF YOU are open to overtures for new connection, and qualified for a salary between $2,500 and $25,000, your response to this announcement is invited. The undersigned provides a thoroughly organized service, of recognized standing and reputation, through which preliminaries are negotiated confidentially for positions of the calibre indicated. The procedure is individualized to each client's personal requirements; your identity covered and present position protected. Established seventeen years. Send only name and address for details. R. W. Bixby, Inc., 117 Downtown Building, Buffalo, New York. tf.

SALESMAN for pulp and paper mill machinery wanted. Give full details in first letter. Address, Box 27-738, care Paper Trade Journal tf.

Pipefitter Foreman Wanted

One who has had experience in sulphite mills, particularly in connection with digesters. Must be first-class. In answer state age, education and past experience.

Paper mill roll grinder also required.

Address, Box 27-796, care Paper Trade Journal. D-29

SITUATIONS WANTED

SUPERINTENDENT desires to make change. Cylinder or Fourdrinier mill making waxings, crepe, napkins and toilet papers. Address, Box 27-749, care Paper Trade Journal. tf.

MACHINE TENDER wants position. 26 years experience running Fourdrinier machine on most all grades of paper. Married and settled. Will go anywhere. Address, Box 27-770, care Paper Trade Journal. D-29

POSITION WANTED—Mill or production manager. Extensive experience in making many grades of paper, also business and mill management. Now employed; can change on short notice. Can get good results. Address, Box 27-820, care Paper Trade Journal. tf.

BOSS FINISHER and shipping clerk. 32 years high grade mills. Reliable, accurate, producer, executive; genial disposition. Address, Box 27-823, care Paper Trade Journal. J-5

WANTED TO BUY—Small Rewinder, small Cutter, large Dryer. Address, Box 27-814, care Paper Trade Journal. D-29

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SALES AGENT, with office and sales force, would like to get direct representation from a manufacturer of a quality line for the paper mills and book binders. Have a large following in users of beater room equipment and machine knives; territory centering in Philadelphia and covering Eastern Pennsylvania, New Jersey and Delaware. Address, Box 27-772, care Paper Trade Journal. D-29

WANTED—In good condition, one or two Hydraulic Pulp Presses with necessary pumps. Give full particulars. Address, Box 27-815, care Paper Trade Journal. J-5

SUPERINTENDENT—Box board or test container. 30 years experience. Southern or Mid-West mill preferred. Good references. Address, Box 27-810, care Paper Trade Journal. J-5

SUPERINTENDENT open for position January 1, 1928. Well up on grease proof, Kraft, toilets, crepes. Good on repairs; get production and quality; 25 years experience. Address, Box 27-811, care Paper Trade Journal. J-5

SUPERINTENDENT or foreman. 18 years experience in making book and specialties, also fine writings. Address, Box 27-812, care Paper Trade Journal. J-5

SALES MANAGER or salesman. Mill desiring efficient and dignified representation by man, 45, having had over twenty years mill and selling experience to jobbers and converters in Eastern Atlantic and Southern states. No objection to location or travel; prefer coarse paper mill. Address, Box 27-813, care Paper Trade Journal. J-5

PAPER BAGS, I CAN GIVE RESPONSIBLE manufacturer adequate representation in New York, Pennsylvania and adjacent states. Also thoroughly acquainted with specialty bag consumers. Address, Box 27-800, care Paper Trade Journal. D-22

KRAFT AND TISSUE LINES WANTED for distribution in New York Metropolitan district by responsible salesman, or can sales manage mill output. Address, Box 27-801, care Paper Trade Journal. D-22

CREDIT MANAGER-BOOKKEEPER: Young man, seven years' experience with large paper concern, desires new connection with opportunity for advancement. Address, Box 27-532, care Paper Trade Journal. D-22

WANTED—Position as boss beaterman or beater engineer. Accustomed to all grades. Good on colors. Married. Earl Davis, 513 W. Willard St., Kalamazoo, Mich. D-29

SUPERINTENDENT—Trained in the manufacture of tissues, all grades, plain and creped; high grade Kraft papers, converting specialties, crepes, waxing, crepe towels, and Kraft, waxed Kraft. Address, Box 27-563, care Paper Trade Journal. J-5

FOR SALE

FOR SALE—Two 600 ton Hydraulic Pulp Presses; two Green Bay Barkers; six Wet Machines—four 36" x 84", one 36" x 72", and one 36" x 78". In good condition for immediate delivery. Reasonable prices. Address, Box 27-819, care Paper Trade Journal. D-22

FOR SALE—One Standard Type "A" International Folding and Gluing Machine. Range in size of boxes from 3" to 21" when folded flat. As good as new. Immediate delivery. Address, Box 27-821, care Paper Trade Journal. D-22

FOR SALE—One 90" Rotary Gumming Machine all complete and practically new, for gumming Kraft and similar papers. Immediate delivery. Reasonable price, for quick sale. Address, Box 27-822, care Paper Trade Journal. D-22

WANTED

URGENTLY WANTED SECOND HAND CAMERON SLITTERS, ANY TYPE AND WIDTH, FROM 42" UP. ADDRESS, BOX 27-824, CARE PAPER TRADE JOURNAL. D-22

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DIVISION OF THE BLACK-CLAWSON COMPANY

SHARTLE

SITUATIONS WANTED

SUPERINTENDENT—Experienced in all grades of box board, container, liner, test stock, etc. Can produce quality and production. A-1 on repairs and handle help successfully. Will go anywhere. Best of references. Address, Box 27-705, care Paper Trade Journal. D-29

POSITION WANTED—Boss beater engineer. Now employed, but would like to make a change. Would accept a position as either boss beater engineer or beater engineer. 15 years experience beating and coloring book, bond, writing, envelope, music, catalog, halftone and all kinds of specialties. Have also sutdied paper making with the I. C. S. Could come at once anywhere in the U. S. A. Address, Box 27-745, care Paper Trade Journal. D-22

SALES MANAGER for concern manufacturing beater room equipment and machine knives desires to make a change. Thoroughly experienced salesman and manager and can produce business. Would like to connect with manufacturer who desires increased business and who can handle large accounts. Address, Box 27-773, care Paper Trade Journal. D-29

MILL CONNECTION WANTED—Capable experienced salesman desires mill connection. Years of experience in the sales of both coarse and fine paper. Willing to travel. Highest credentials as to ability and integrity. Address, Box 27-490, care Paper Trade Journal. tf.

WANTED—A position as tour boss or machine tender. Up on all kinds of box or test boards. Can give good references. Address, Box 27-769, care Paper Trade Journal. tf.

ASSISTANT SUPERINTENDENT — College graduate, chemist, nine years practical experience and research in rag fine writing papermaking and specialties, desires position with opportunity for advancement. Address, Box 27-320, care Paper Trade Journal. tf.

PULP AND PAPER MILL ENGINEER—Mills contemplating alterations and extensions can have plans made up and work supervised by competent engineer with many years experience. References furnished. Address, Box 27-776, care Paper Trade Journal. D-29

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To develop and handle sales for Tissue Mill. Must be a constructive result getter. Will have chance to invest substantially in business if successful.

An unusual opportunity for the right man.

Address, Box 27-764, care Paper Trade Journal. D-29

MISCELLANEOUS

SALESMAN covering Michigan and Northern Indiana calling on converters, grocery and paper jobbers would like one or two good lines to add to present lines. Particularly interested in Kraft and Butchers. Address, Box 27-797, care Paper Trade Journal. D-22

SEND YOUR ODD LOT LIST of coarse and fine papers together with samples to Goldman Paper & Paper Stock Co., 414 So. Front Street, Philadelphia, Pa. tf.

WANTED—Mill ends and job lots in rolls or flats in any quantity, all grades. Also boards. Joseph Goldstein & Sons, 1302-9 N. Halsted Street, Chicago, Illinois. tf.

CLARK MANUFACTURING COMPANY, Holyoke, Mass. Telephone 1828. Builders of cylinder moulds, couch and felt rolls, dandy rolls. We cover dandies and cylinders tight, for fast running machines. 3-5-27

WANTED—Side or odd lot rolls ten to ninety pound basis. The larger the quantity the better we like it. Address, Box 27-481, care Paper Trade Journal. tf.

MISCELLANEOUS

THE PEERLESS PAPER MILLS, Oaks, Pa. Telephone Phoenixville 429, wants patented paper specialties to manufacture. Accepted article will be bought outright or made and marketed on a royalty basis. After January first additional floor space will permit leasing 5,000 to 10,000 square feet for storage purposes; reasonable rates. D-22

WANTED TO BUY—Special Lots, or overrun—all grades of paper. Lutz Paper Co., 17 E. 42nd Street, New York City. e.o.w.12/31/27

WANTED

WANTED—2 W. & P. Pulpers, 2 Filter Presses and 1 Rogers Wet Machine. Address, Box 27-285, care Paper Trade Journal. tf.

WANTED—Rewinder to handle sheet not less than 50" or more than 72" wide. Address, Box 27-671, care Paper Trade Journal. tf.

WANTED—Small digester, preferably lined, suitable for cooking sulphite for experimental purposes. Must be in good shape and carry standard pressure. Address, Box 27-790, care Paper Trade Journal. D-22

HAMBLET SHEET CUTTER, 46"-50" with stand. Mid-States Gummed Paper Co., 2433 So. Robey St., Chicago, Ill. J-5

WANTED—Bird Rotary Screen, Cylinder Machine, and Blow Tanks. Address, Box 27-818, care Paper Trade Journal. J-5

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OPPORTUNITY for someone seeking active connection with or control of long established operating paper Mill. Fourdrinier machines, 50 tons daily capacity. $50,000.00 capital required. Address, Box 27-793, care Paper Trade Journal. D-22

PAPER COMPANY DESIROUS OF EXPANSION can obtain one-half to full interest in going profitable Eastern mill, containing three Fourdrinier machines with total trim of 280 inches. Labor, fuel and freight rates good. Mill adaptable for bleached or unbleached papers or specialties. Proposition will stand closest investigation. Address, Box 27-802, care Paper Trade Journal. D-29

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FOR SALE—One 74 inch Seybold 20th Century Automatic Clamp Paper Cutter. One 72 inch double automatic collapsing reel, complete. One small Moore and White Speed Change, complete, with stands. All in good condition. Address, Box 27-798, care Paper Trade Journal. D-29

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3—72" wet machines.
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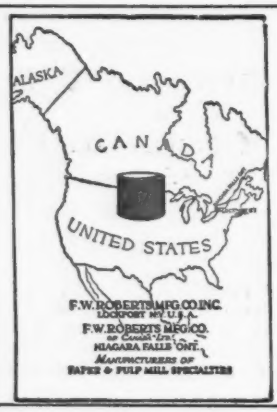

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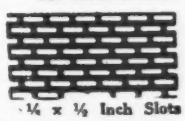
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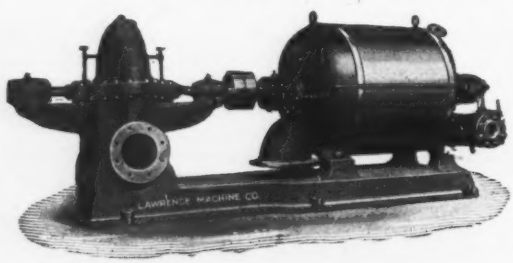

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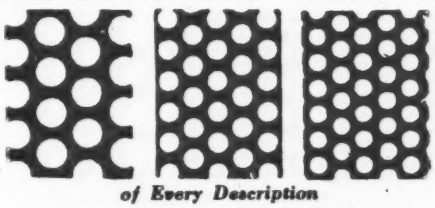

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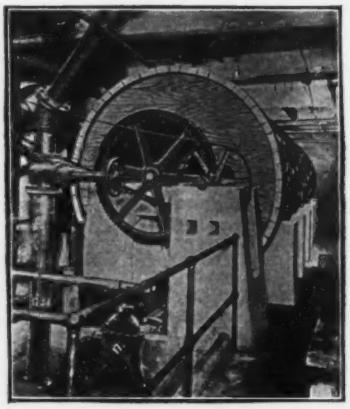

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